REPORT RESUMES

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A PRELIMINARY EXPLORATION OF FACTORS ASSOCIATED WITH SCHOOL HOLDING POWER FOR EDUCABLE MENTALLY RETARDED ADOLESCENTS.

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KANSAS CITY SCHOOL DISTRICT, MO.

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AN EXPLORATION OF THE SCHOOL HISTORIES OF SAMPLE EDUCABLE MENTALLY RETARDED ADOLESCENTS WAS UNDERTAKEN TO IDENTIFY FACTORS RELATED TO SCHOOL CONTINUANCE AMONG SUCH STUDENTS, AND TO PROVIDE INFORMATION ON WHICH TO BASE RECOMMENDATIONS FOR IMPROVEMENT OF SECONDARY SCHOOL PROGRAMS. THE TWO SAMPLES USED IN THE STUDY WERE (1) 354 SEVENTH- AND EIGHTH-GRADE STUDENTS IN SCHOOL IN 1952 AND (2) 158 TENTH-GRADE STUDENTS IN SCHOOL AT THE TIME OF THE STUDY. THE DATA INCLUDED ACHIEVEMENT, INDIVIDUAL AND GROUP INTELLIGENCE TEST SCORES, SUBJECT GRADES, TEACHER RATING ON PERSONALITY TRAITS, HEALTH HISTORY, SCHOOL PROGRESS, FAMILY DATA, PUPIL PARTICIPATION IN ACTIVITIES, AND PERSONAL INTERVIEWS. ANALYSIS OF DATA IDENTIFIED THE FOLLOWING FACTORS RELATED TO SCHOOL CONTINUANCE--(1) MARKS IN SUBJECTS, (2) SEX OF PUPIL, (3) NUMBER OF PERSONAL PROBLEMS REPORTED, (4) RATING ON PERSONAL TRAITS, (5) PUPIL MOBILITY, (6) SIBLING EDUCATION, (7) PARENT EDUCATION, (8) LOW INCIDENCE OF JUVENILE COURT RECORDS, (9) INCIDENCE OF HEALTH PROBLEMS, AND (10) PARTICIPATION IN EXTRACURRICULAR ACTIVITIES. THE STUDY REVEALED THAT A LARGE PERCENTAGE OF THE STUDENTS IN BOTH SAMPLES LEFT SCHOOL EARLY, AND APPROXIMATELY 58 PERCENT LEFT BEFORE THE TENTH GRADE. AN INTENSIFIED AND CONTINUING PROGRAM OF COUNSELING BASED UPON COMPETENT INDIVIDUAL ASSESSMENT WHEN THE STUDENT ENTERS HIGH SCHOOL IS RECOMMENDED. (GC)

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FACTORS
ASSOCIATED WITH SCHOOL HOLDING POWER
FOR
EDUCABLE MENTALLY RETARDED ADOLESCENTS

A PRELIMINARY EXPLORATION OF FACTORS ASSOCIATED WITH SCHOOL HOLDING POWER FOR EDUCABLE MENTALLY RETARDED ADOLESCENTS

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SCHOOL DISTRICT OF KANSAS CITY, MISSOURI

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AN EXPLORATION OF FACTORS ASSOCIATED WITH SCHOOL HOLDING POWER FOR EDUCABLE MENTALLY RETARDED ADOLESCENTS

INTRODUCTION

Increasing awareness of the seriousness of the problem of early school withdrawal has become increasingly evident during the past several years. National leaders have expressed concern about the acute shortage of trained manpower that exists in our nation, and this condition has been related to the reduction of the number of trained people that occurs every time a pupil fails to complete the school training program. Each time a pupil leaves school early, it not only reduces the supply of trained manpower, but it also increases the number of untrained people who must strive for an acceptable place in society.

Numerous studies have appeared in the literature which represent serious efforts to investigate the problem of early withdrawal and to identify factors associated with this early withdrawal, so that corrective and preventive measures could be applied to school programs and thereby reduce the incidence of early withdrawals. In general, the outcomes have indicated that a great variety of factors play a part in precipitating early withdrawal from school. Often, however, it has been discovered that the relationship between specific factors and school continuance has been of such low magnitude that the factor would not serve as an efficient predictive criterion, and thus loses much of its power as an indicator of early withdrawal for individual pupils. Prominent among such findings have been indications of the need for curriculum adjustment, especially in the secondary schools, and for enlarged and intensified guidance services.

Upon the face of it, it would appear that the matter of the incidence of early withdrawal is a statistic that should be readily available. However, the matter is a complex one. It is complicated by the matter of pupil mobility which takes pupils from one area to another area, the matter of mobility within a city system where pupils may leave one school to go to another school, or leave a public school system to enter a private or parochial school system, and the matter of pupils who simply disappear with no information left as to their destination. It is further complicated by pupil accounting procedures in that such procedures vary from district to district. Some evidence of the size of the problem of early withdrawal may be gleaned from the report of a four-year study,[1] coordinated through the Office of Education, beginning with a ninth grade class of 1951.

This study is concerned with the segment of the school population known as the educable mentally retarded. Special programs for educable pupils have been in existence for many years, with recent years showing a rapid increase in special classes. However, it is still true that by far the largest number still receive their education in the regular grades, with a small number who receive their training in residential schools or programs other than special classes in the schools. In most cases the eligibility of pupils for special class placement is determined according to the IQ limits adopted by the state or local school system, and by the extent to which the pupil is able to achieve up to his capacity, the extent to which he is generally accepted by his peers, and his operational characteristics in the community, at school, and at home.

This school system for many years has provided for educable mentally retarded children in the elementary school. The classes have carried many different names, but the essential organization has been to provide for the group of children with retarded mental development.

In recent years the general group has been stratified for instructional purposes according to level of measured intelligence. Pupils with IQ's 50 to 68 have been in classes known as "special". These classes carry a maximum enrollment of 15 pupils. Other pupils, with IQ's of 69 to 80, have been enrolled in classes known as "ungraded". These classes carry a maximum enrollment of 20 pupils. Both types of classes have been approved for state reimbursement. Over the years one-third to one-half of the total pupil population eligible for special placement have been served. Most of the eligible pupils not placed are those for whom transportation would be too difficult, or whose parents have refused permission to place them in the special class. In Kansas City special placement is not compulsory, and if a parent does not give consent for special placement, a child is not so placed. There is a certain number of children eligible for special placement who have not been placed because no space in the special classes was available to them. There is no program for trainable mentally retarded available at this time.

In the secondary school, provisions for educable mentally retarded pupils have been largely inadequate. The pupil entering the secondary school from the elementary school program, either special or regular, has found that he must enter the regular curriculum. Some children who are unable to carry the work of the high school are excused from further school attendance by authorized school officials. This is done with the consent of the parents of the child so excused. Other children attempt the secondary school program, and if they find that they are unable to master the work, they withdraw early from school.

This study was proposed as an exploration of the school history of a sample of educable mentally retarded adolescents with the view toward identifying factors related to continuance in school, and providing information upon which to base recommendations as to how the secondary school program may be modified to meet better the needs of such pupils.

The specific questions posed for answer from the data accumulated in this study were as follows:

A. How many complete the high school program?

B. What is the incidence of drop-outs after completing the elementary school program and before completing the high school program?

C. At what points, during the secondary school years, is the drop-out rate highest?

D. What factors appear to contribute most to continuance in school?

E. What factors appear to contribute most to early school leaving?

F. How is the incidence of early school leavers related to the state compulsory attendance law?

G. How can the holding power of the secondary school be increased for these pupils?

This study was organized in two parts. The first part, dealing with the children who had had an opportunity to graduate from high school and involving a study of their past records in school, is known as the Retrospective Aspect and is included in this report as Part I. The second part of the study includes those pupils enrolled in the 10th grade at the time this study started. By following these pupils it would make possible a test of the effect of the new Missouri compulsory attendance law. This part of the study is known as the Prospective Aspect and is reported here as Part II.

PART ONE

RETROSPECTIVE ASPECT

SELECTION OF SAMPLE

School systems employ various techniques in studying the characteristics of pupils enrolled in their schools. One of these techniques is based upon the early assessment of scholastic aptitude as indicated by measured intelligence. In Kansas City a program based upon individual intelligence testing is regular procedure. Revised Stanford-Binet Scales are administered by trained examiners operating out of the office of Psychological Services, with the objective of providing an individual intelligence test score at some time during the first four grades for every child enrolled in the Kansas City, Missouri, Public Schools. The bulk of this testing is centered in the Kindergarten and First Grade, so that the score may become available at the earliest possible time. As a child progresses through school, if his performance in the school is substantially different from that which would be predicted on the basis of the intelligence test score, the child may be referred for re-test. This happens frequently, and many of the children have multiple testings during their elementary grades.

In Kansas City those pupils who score at I.Q. 80 or below on the individual intelligence test are considered eligible for consideration for placement as mentally retarded pupils. Accordingly, the first criterion for selection in this study sample was a measured I.Q. of 80 and below. The names of these pupils were available from the records in the office of Special Education and from an annual report by the elementary principals which lists by grade all children having IQ's of 80 and under.

In order that every pupil selected for study would have had an opportunity to graduate from high school, the second criterion was that the pupils were in the 8th or 9th grade in the fall of 1952.

Application of the two criteria indicated above, I. Q. 80 or below on the individual intelligence test and in the 8th or 9th grade in the fall of

1952, resulted in the identification of some four hundred pupils who appeared to be candidates for this study. Refinement of this tentative sample was made upon the basis of additional intelligence test scores, where the most recent score was over 80 on the revised Stanford-Binet scale, and sifting for duplication of names. The total sample was ultimately set at 354 pupils. Of these 354 pupils, 208 (58.76%) were boys and 146 (41.24%) were girls. The geographical distribution of the sample included all high schools in the city, and as nearly as could be ascertained, included the total population of mentally retarded youngsters in the 8th and 9th grade in the fall of 1952.

The actual number of pupils included in the sample is reported in Table I.

TABLE I

SAMPLE COMPOSITION BY NUMBER AND SEX

Group	N	$\%N_T$	N_B	N_G
Graduates	59	16.67	25	34
Withdrawals	295	83.33	183	112
Grade 12	13	3.68	9	4
Grade 11	46	12.99	21	25
Grade 10	66	18.64	41	25
Grade 9	110	31.07	74	36
Grade 8	60	16.95	38	22
Total	354	100.00	208	146

SOURCES OF DATA

The sources utilized in the accumulation of data for this study may be classified under three general headings: (1) information obtained from school records, (2) information obtained from personal interviews, and (3) information obtained from the records of community agencies.

School Records. Information concerning individual pupils is accumulated in three different places in the Kansas City system. In the elementary school a cumulative record card is started at the time a child enters the public schools. Information concerning marks in subjects, teacher rating on personal traits, and school progress was taken from these cards. In the secondary school the permanent record card provides much the same information - marks in subjects, teacher rating on personal traits and school progress records were also taken from these cards. The third record, known as the health history record, includes information concerning childhood diseases, disease prevention measures, records of illness and accidents, and records of specific sensory defects. These health history records are cumulative, beginning at the time a child enters the school and continuing until the time he leaves the school.

Interview. Intensive efforts were directed toward locating the pupils who were included in the sample population. The last known address recorded in the school records was verified by reference to the City Directory, the Kansas City Telephone Directory, and the cross-reference directory in order to establish present residence of the persons involved. In many instances these records were inconclusive. As a result it was necessary to go to other sources of information.

One of the other sources of information was the records of the Jackson County Juvenile Court. Juvenile Court files concerning any of the pupils in the sample were made available. In some cases the pupil had had a contact with the Juvenile Court more recently than with the public schools.

Another source of information came from a service of the United States Post Office. This service consisted of the delivery of cards on which the last addresses and complete names of the persons not located were inscribed.

Whenever available, the new address was placed on the cards and the cards then in turn returned to the Research Office. A number of cases were located in this manner.

Another source of data was the records of the Jackson County Welfare Office. It seemed likely that some of the people that had not been located as a result of other efforts might be receiving aid in some form through the Jackson County Welfare Office. Accordingly, the director of that office was approached, and he made available the master files in which it was possible to check for any of the people previously unlocated. Some additional cases were located in this fashion.

Help in locating individuals also came from the Kansas City Police Department. With the cooperation of the Police Department, two of the former pupils were located and interviewed while in the city jail.

One of the complications that was encountered in locating the individuals included in the study arose from the efforts of the Urban Redevelopment Program of downtown Kansas City. The results of that program led to a shifting of population away from an area that had been heavily populated and which had contributed numerous children to the population of the sample. Many of the buildings formerly occupied by the pupils in the sample had been razed in order to provide space for a right of way for a new trafficway. The people who occupied these buildings had scattered. Some moved to low cost housing projects, many had left the city with no forwarding address, while still others had relocated in dwellings throughout the city. The office of the Kansas City Urban Redevelopment Association was contacted, and full cooperation was given in the efforts to locate these people.

Because of various social factors and the mandatory population shift, some of the children formerly attending public schools were located as having transferred to parochial schools. The parochial schools were contacted and cooperated in providing transcripts of the records of the pupils in their schools and in providing other useful information.

Occasionally former neighbors could advise as to the new addresses of the people who had moved. Also, local delivery men sometimes knew where the family previously occupying the dwelling had moved. Neighborhood children often were of assistance in locating their former associates.

Whenever the indication came that a child had moved to another city and the name of that city was available, a request for information was sent to the school system of that city. In some instances it was discovered that the pupils had enrolled in that city, but generally there was no record of the child having entered that school system. In those cases where the pupil had entered the school system of the city, addresses were obtained and some interviews were completed by mail.

Still another lead came from obtaining the names and addresses of relatives of the pupils included in the study. Mailed inquiries occasionally helped to locate an individual, and in some cases it was discovered that the relatives were also trying to locate the same individuals.

As a result of these intensive efforts it was possible to locate 243 of the sample of 354 children.

Community Agencies. Among the community agencies contacted for information concerning the children in the sample, the Juvenile Court proved to be the most informative. Through the cooperation of the Juvenile Court officials, the files of all of the pupils involved in the sample were made available for abstraction of information.

ORGANIZATION FOR STUDY

After the sample had been identified in final form and basic information concerning the incidence of withdrawal and graduation had been obtained, it was possible to organize the sample into sub-groups for study purposes. Six sub-groups were identified, based upon the year of withdrawal or graduation. Thus we had those pupils who graduated, those who withdrew during or the summer immediately preceding Grade 12, those who withdrew during or the summer immediately preceding Grade 11, those who withdrew during or the summer immediately preceding Grade 10, those who withdrew during or the summer immediately preceding Grade 9, and those who withdrew during the 8th grade. These six sub-groups provided the framework about which the tabulations of information were made.

The next question revolved around the factors to be investigated during the course of the study. These factors were selected according to the likelihood that a positive and definite relationship would exist between such factors and continuance in school, and whether or not information would be available. The factors selected for investigation were grouped under five general headings, each one with direct pupil relevance. The five general headings, with appropriate sub-headings, are shown in Figure 1.

INCIDENCE OF GRADUATES AND WITHDRAWALS

One of the very basic questions with which this study is concerned is the question of what happens to that segment of the secondary school population that has been identified as mentally retarded. This question was approached through the accumulation of data showing the number of pupils that complete the high school program, the incidence of withdrawal after completing the elementary school program and before completing the high

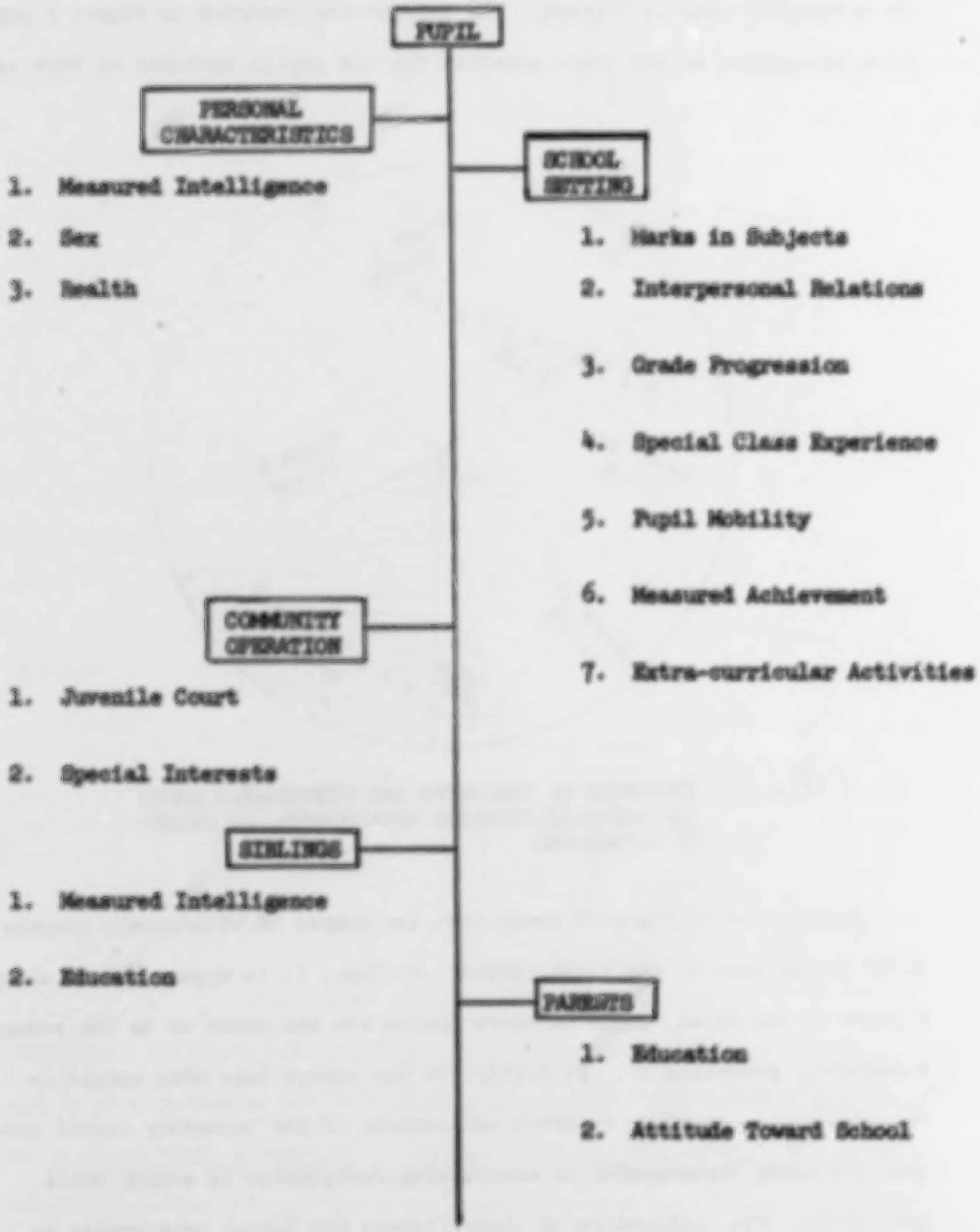
PUPIL
PERSONAL CHARACTERISTICS
1. Measured Intelligence
2. Sex
3. Health
SCHOOL SETTING
1. Marks in Subjects
2. Interpersonal Relations
3. Grade Progression
4. Special Class Experience
5. Pupil Mobility
6. Measured Achievement
7. Extra-curricular Activities
COMMUNITY OPERATION
1. Juvenile Court
2. Special Interests
SIBLINGS
1. Measured Intelligence
2. Education
PARENTS
1. Education
2. Attitude Toward School

Fig. 1 AREAS OF INVESTIGATION

school program, and the points at which, during the secondary school years, the withdrawal rate is highest. The information reported in Figure 2 supplies the answer to the basic question for the pupils included in this sample.

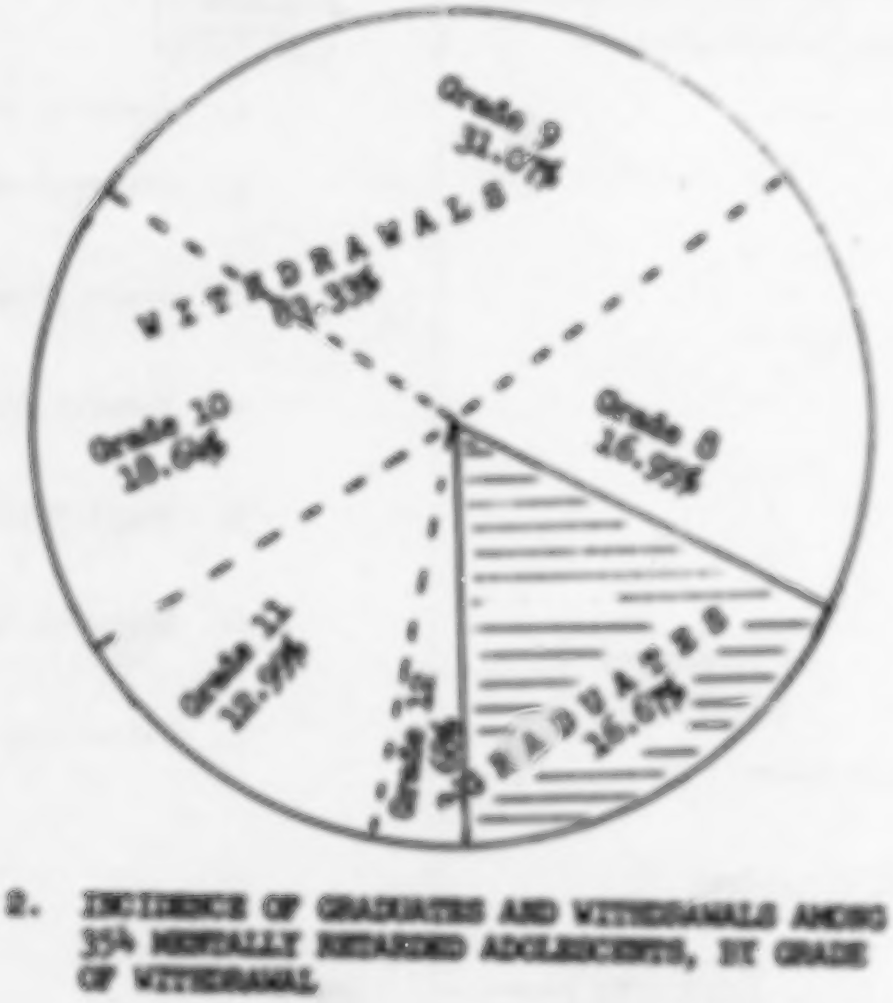

Fig. 2. INCIDENCE OF GRADUATES AND WITHDRAWALS AMONG 354 MENTALLY RETARDED ADOLESCENTS, BY GRADE OF WITHDRAWAL

Examination of Figure 2 shows that the number of withdrawals amounts to 83.33 per cent of the total sample. Further, it is apparent that almost a third of the total sample withdrew during the 9th grade or in the summer immediately preceding it. Evidently, to the extent that this sample is representative, mentally retarded adolescents in the secondary school program are quite unsuccessful in maintaining continuance in school until graduation. The implication of these figures for school programming is clear. Special provisions need to be made in the secondary school program for educable mentally retarded adolescents, and whatever is done will need to be started at an early point in the secondary school experience in order to prevent the high incidence of withdrawal that occurs during the first few years of the secondary school.

FACTORS INVOLVING PERSONAL CHARACTERISTICS

MEASURED INTELLIGENCE

One of the hypotheses of this study was that pupils in the higher ability levels, within the range included in this sample, would be those most likely to continue in school. By definition, the pupils in this group include those with measured I. Q. of 80 and below on individual intelligence tests. In describing this sample a mean I. Q. of 72.20 was obtained. The median I. Q. for the total sample was found to be 74.00. The mean and median IQ's for each of the groups are reported in Table II.

TABLE II

MEASURED INTELLIGENCE BY GROUP

Group	$\bar{X}$ I. Q.	Median I. Q.	N
TOTAL	72.20	74.00	354
Graduates	73.78	76.00	59
Group 12	71.46	73.00	13
Group 11	72.24	74.00	46
Group 10	72.58	74.00	66
Group 9	71.99	75.00	110
Group 8	70.73	72.00	60

From Table II it can be seen that, with reference to the mean I. Q., the mean obtained for the graduating group was less than two points above the mean for the total group, and further, that the lowest mean obtained for any group, Group 8, was less than two points removed from the total group mean. In comparing the lowest and highest means obtained for the sub-groups the spread is approximately three points.

When these values are considered it appears that there is little relationship between level of measured intelligence and continuance in school so far as this particular sample is concerned. Apparently factors other than intelligence are involved in causing the pupils to persist in their school endeavors until graduation.

CHRONOLOGICAL AGE

Chronological age at time of withdrawal from school was another point investigated. The mean chronological age at time of withdrawal is reported in Table III.

TABLE III

CHRONOLOGICAL AGE AT WITHDRAWAL BY GROUP AND SEX

	Total $\bar{x}$ C A	N	Male $\bar{x}$ C A	N	Female $\bar{x}$ C A	N	Range
Graduates	19.10	59	19.36	25	18.91	34	21 - 18
Group 12	18.39	13	18.56	9	18.00	4	21 - 17
Group 11	17.70	46	18.05	21	17.40	25	21 - 15
Group 10	16.73	66	16.61	41	16.92	25	19 - 15
Group 9	16.27	110	16.38	74	16.03	36	19 - 14
Group 8	16.00	60	16.26	38	15.55	22	20 - 13

From Table III it can be seen that the mean age at time of withdrawal shows progressive reduction from the graduates through Group 8. This would be the expected relationship. Comparison of the mean chronological ages reported here and the average chronological age of pupils in the respective grades indicates that the study pupils were somewhat overage at the time of withdrawal. This is particularly noticeable for the groups 8, 9, and 10, where the differences between the groups are relatively small with respect to mean chronological age. For the 11 and 12 groups the advancement in chronological age is of relatively small magnitude. But for the graduates, the amount of difference in chronological age between the study graduates and graduates in general increased. Year by year progression in grade is treated more fully in a later section.

SEX

The relative effectiveness of mentally retarded boys as compared with mentally retarded girls in maintaining school continuance was also a question of concern. Figure 3 shows the percentage of boys and girls in the total sample, the percentage of each that graduated or withdrew, and the percentage of each in the graduate group.

Examination of Figure 3 shows that among those who graduated there were more girls than there were boys. For the total sample, approximately 59 per cent were boys and 41 per cent were girls. If the factors related to continuance in school operate without prejudice to either sex, then the proportions of boys and girls who graduated should be approximately the same as the proportions of boys and girls in the total sample. Actual findings, however, show that the proportions were reversed almost exactly. Of the total number of graduates, approximately 58 per cent were girls and 42 per cent were boys. Application of a test of statistical significance for percentages[2] resulted in $T = 2.66$. A T-value of this amount indicates that the proportion of girls in the graduate group was statistically significantly

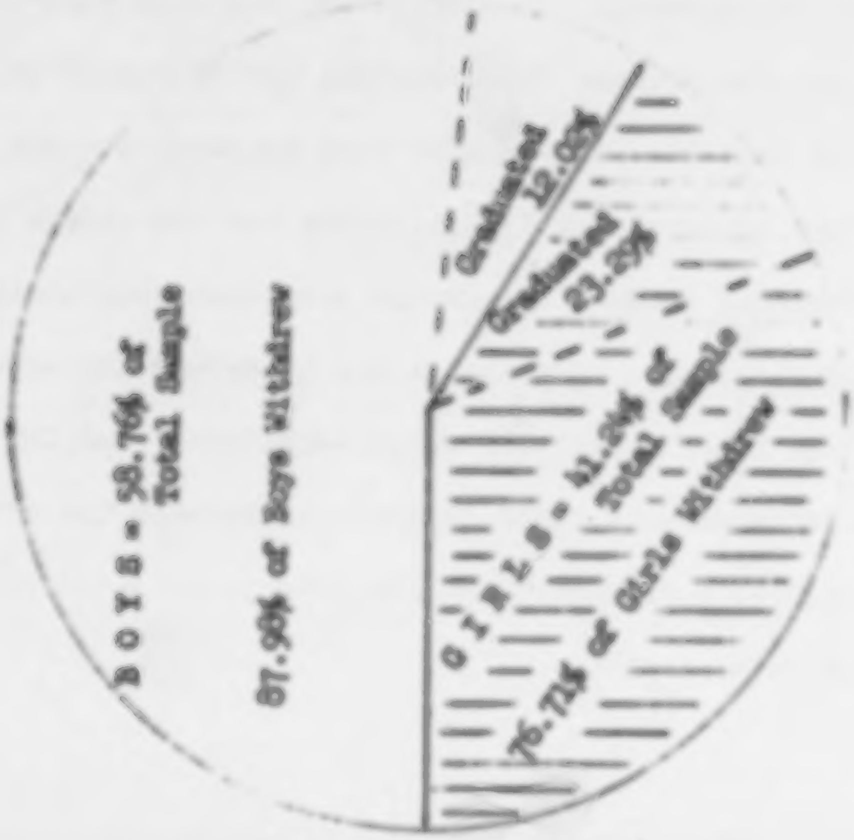

Fig. 3. INCIDENCE OF GRADUATES AND WITHDRAWALS AMONG 354 EDUCABLE MENTALLY RETARDED ADOLESCENTS, BY SEX

greater than would be predicted according to the proportion of girls in the total sample. Apparently the girls were more successful than the boys in continuing in school until graduation.

HEALTH PROBLEMS

The third variable investigated in connection with the consideration of personal characteristics was health problems. A health record is started at the time the pupil enters the school system and continues until he leaves the school system. Information concerning annual measures of height, weight, vision, auditory acuity, dental condition, and other indicators of health status are recorded on this health record card. The health record cards for the pupils included in the sample were located and examined and notation made of any condition that might be construed as likely to affect school progress. These notations were then tabulated according to sub-group and

TABLE IV

REPORTED HEALTH PROBLEMS BY GROUP AND SEX

	Grad		12		11		10		9		8		TOTAL		
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	T
Visual	4	1	1	0	5	0	2	3	7	4	2	1	21	9	30
Speech Defect	3	3	2	0	2	2	3	4	6	1	0	1	16	11	27
Auditory	2	0	0	0	3	1	1	1	6	2	1	0	13	4	17
Nervous	2	1	0	0	0	1	3	2	2	1	5	0	12	5	17
Cardiac	0	0	0	0	1	2	2	1	4	1	3	2	10	6	16
Respiratory	0	0	0	0	0	0	2	0	5	0	1	0	8	0	8
Malnutrition	0	0	0	0	0	1	1	1	2	1	1	0	4	3	7
Polio	1	1	0	0	0	0	1	0	1	1	0	0	3	2	5
Head Injury	0	0	0	0	0	0	1	0	2	1	1	0	4	1	5
Tuberculosis	0	0	0	0	0	0	2	1	0	1	0	0	2	2	4
Dental	0	0	0	0	0	0	1	0	2	1	0	0	3	1	4
Obese	0	1	0	0	0	0	1	0	0	0	2	1	3	1	4
Throat	0	0	0	0	0	1	0	1	1	0	0	1	1	3	4
Thyroid	0	0	0	0	0	0	0	1	1	0	1	0	2	1	3
Adenoids	0	0	0	0	0	0	0	1	2	0	0	0	2	1	3
Headaches	0	0	0	0	0	0	1	0	0	0	0	1	1	1	2
Burns(scars)	0	0	0	0	1	0	0	0	0	1	0	0	1	1	2
Epileptic	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
Stomach	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2
Migraine	1	0	0	0	0	0	0	0	0	0	1	0	2	0	2
Blood	0	1	0	0	0	0	0	0	1	0	0	0	1	1	2
Mastoid	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2
Hernia	0	0	0	0	0	0	1	0	0	0	1	0	2	0	2
Deformity, knee trouble, skinn, wired knee, diabetic, facial paralysis, alcoholic, scarlet fever, glandular fever, lumps under skin, enuresis, poor health stiff hand, back and stomach trouble							1 each						12	2	14
Σ	15	8	3	0	13	8	25	17	48	18	22	8	126	58	184
	23		3		21		42		66		30				
N =	25	34	9	4	21	25	41	25	74	36	38	22	208	146	354
	59		13		46		66		110		60				
% =	38.98		23.08		45.65		63.63		60.00		50.00		60.57	39.72	51.97

are reported in Table IV.

The question under investigation here was whether or not a relationship existed between the incidence of reported health problems and continuance in school. Examination of Table IV indicates that there is some reason to believe that such a relationship would exist. An effort to assess the extent of this relationship was made with the application of the contingency coefficient[3]. The resulting coefficient was found to be C = .206. A contingency coefficient of this magnitude indicates a positive relationship significantly different from zero, but is not sufficiently high to serve as a predictive criterion.

It should be noted at this point that no attempt was made to assess the severity of the health problem, since insufficient information was available to accomplish such an objective. Analysis of the reported health problems failed to reveal any apparent relationship between the type of health problem and continuance in school.

FACTORS IN THE SCHOOL SETTING

MARKS IN SUBJECTS

In the elementary school, marks are recorded according to a numerical scale of one to five with five as the high mark. Secondary school marks are recorded as follows: E = excellent, S = superior, M = medium, I = inferior, and F = failing. These marks in secondary school subjects were translated to quantitative statements by assigning a value of E = 5, S = 4, M = 3, I = 2, and F = 1. Pupil marks in subjects for the total sample were abstracted and recorded, and mean marks calculated for each group by subject and grade. A comparison of graduate mean marks with the mean marks for the other groups is reported in Table V.

TABLE V

COMPARISON OF GRADUATE MEAN MARKS FOR ALL SUBJECTS WITH OTHER GROUPS MEAN MARKS FOR ALL SUBJECTS

Comparison	Graduates	Other Group	Difference
Grad vs Group 12	2.95	2.74	.21
Grad vr Group 11	2.95	2.58	.37*
Grad vs Group 10	2.95	2.53	.42*
Grad vs Group 9	2.95	2.56	.39*
Grad vs Group 8	2.95	2.46	.49*

*Statistically significant at .01 level of confidence

Although the mean mark achieved by graduates fell in the I range, it exceeded the mean mark for each of the other groups. The application of tests of statistical significance[4] revealed that the difference between the graduate mean mark and the mean mark for each of the other groups was statistically significant, except the comparison with the Grade 12 group, where the difference was approaching significance but did not satisfy the criterion of .05 level of significance. These results indicate that the graduates achieved significantly higher marks than the other groups.

The question then arose as to the particular subject areas in which the marks had been highest. Assuming a mark of M as indicating average work, the subject areas in which mean marks of 3.0 (M=3) and above were obtained were identified and tabulated for each group by subject and grade. The results are reported in Table VI.

Examination of Table VI shows that in general the pupils were most successful in the areas often referred to as non-academic. In moving across the rows from left to right it can be seen that for the graduating group, there was no grade at which they did not achieve average success in some area. However, as the grade at time of withdrawal lowers it is apparent that the early withdrawal groups were less successful than the graduating group in maintaining some areas in which they achieved average marks. It can also be seen that during the year of withdrawal, or the year immediately preceding withdrawal, that, as groups, the pupils had no subjects in which they achieved average marks. To illustrate, the pupils of the Grade 12 group, who had persisted in school until they reached the twelfth grade, finally withdrew after a year of experience during which they as a group received no average marks. For this Grade 12 group, at the eleventh grade there were no subjects for which they as a group had an average mark, and during or immediately preceding the twelfth grade, these pupils withdrew from school. Attention might well be directed toward the Grade 10 group which shows remarkable persistence in that their record of failure to achieve average marks in any subjects begins with the eighth grade. In the third successive year of failure to achieve average marks in any subject these pupils withdrew. It is of interest to note that for the groups 8 and 9, the history of failure to achieve average performance in marks goes back as far as the fifth grade.

It is apparent from these figures that there is a definite relationship between average marks in at least some subjects and continuance in school.

After the computation of mean marks of average or above, it then became apparent that a tabulation should also be made of the mean marks for those subject areas below 2.0. A mark below 2.0 would represent an average of F. These special areas are reported by grade and group in Table VII. Table VII is the complement of Table VI. Here it can be seen that for the graduating group there was no grade at which, as a group, their mean mark

TABLE VI

MEAN MARKS 3.0 AND ABOVE, BY SUBJECT, GRADE AND GROUP

	Kgn	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Grad	Hlth. Cit.	Hlth. Cit.	Wk.Hab. Mus. Art Cr.La. Hlth. Cit.	Mus. P.E. Cit.	Mus. P.E. I.A.	P.E. Art	Mus. P.E. Art I.A.	Mus. P.E. I.A.	P.A. Art P.E. Mus. L.A.	P.E. I.A. Mus.	P.E. I.A. Mus. Art Spch.	Mus. P.E. I.A,	Mus. I.A. P.E. Typ.
12	Cit.	Hlth. Cit.	Wk.Hab. Mus. Art Rdg. Cr.La. Hlth. Cit.	Mus. P.E. Hum. Art Rdg. La.Me. Cit.	P.E. Art	P.E. Art	P.E I.A.	P.E.	P.E. Mus.	P.E. Mus.	P.E. Mus.	NONE	NONE
11	Hlth. Cit.	Hlth. Cit.	Hum. Hlth. Cit.	Mus. P.E. Cit.	P.E. Cit.	P.E.	Mus. P.E. Art I.A.	P.E.	P.E. Mus.	Mus.	NONE	NONE	
10	Hlth. Cit.	Hlth. Cit.	Mus. Hlth. Cit.	P.E. Cit.	P.E.	P.E.	P.E. I.A.	Mus. P.E.	NONE	NONE	NONE		
9	Hlth. Cit.	Hlth. Cit.	Mus. Hlth. Cit.	P.E. Cit.	P.E.	NONE	P.E.	P.E.	NONE	NONE			
8	Hlth.	Hlth.	Hlth. Cit.	P.E.	Cit.	NONE	P.E.	P.E.	NONE				

TABLE VII

MEAN MARKS BELOW 2.0, BY SUBJECT, GRADE AND GROUP

	Kgn & 1st	2nd	3rd	4th	5th	6th & 7th	8th	9th	10th	11th	12th
Grad	None	None	None	None	None	None	None	None	None	None	None
12	None	None	None	None	None	None	None	ENG.	ENG. MATH	ENG. SCI. SO.ST.	(No N over 3--only marks not F were COR & Dr. Ed.)
11	None	None	None	None	None	None	None	MATH	ENG. MATH SCI. SO.ST.	ENG. SCI. SO.ST.	
10	None	None	None	None	None	None	None	ENG. MATH SO.ST. SPCH.	ENG. MATH SCI. SO.ST. IND.ART		
9	None	None	None	NUM.	CR.LA. LA.ME.	None	None	ENG. MATH SCI. SO.ST. ART PHY.ED. IND.ART			
8	None	NUM.	CR.LA.	CR.LA. LA.ME.	None	None	MATH C.L. MUSIC				

was F. All of the other groups show that they had experienced mean marks of F at some point in their school history. During the year of withdrawal or the year immediately preceding it, all of the sub-groups except graduates had mean marks of F in one or more subjects. For some groups this experience of failure started as early as the second grade where the grade 8 group had a mean failing mark in "Numbers". This experience was repeated in the third and fourth grade in "Language" and by the time the eighth grade was reached they were failing all major subjects. It was at this point that they withdrew from school.

Considering the evidence as shown in Tables VI and VII, it appears that what actually happened to these pupils is that they failed out of school.

TABLE VIII

SUBJECTS INCLUDED AS ACADEMICS

Level	Subject Area
Kindergarten	Scholarship
1	Scholarship
2	Numbers, Reading, Language, Scholarship
3	Numbers, Reading, Language-Creative, Language-Mechanics
4	Numbers, Language-Creative, Language-Mechanics, Social Studies
5	Numbers, Language-Creative, Language-Mechanics, Social Studies
6	Numbers, Language-Creative, Language-Mechanics, Social Studies, Science
7	Numbers, Language-Creative, Language-Mechanics, Social Studies, Science
8	English, Math, Science, Social Studies, Common Learnings, Language Arts
9	English, Math, Science, Social Studies
10	English, Math, Science, Social Studies
11	English, Math, Science, Social Studies
12	English, Math, Science, Social Studies

In further considering marks in subjects it seemed desirable to divide the subjects according to those that could be classified as academic and those that would be classified as non-academic. For this purpose of classification, subject areas were identified at each grade level. The subject areas so identified are reported in Table VIII. Mean marks were then computed by groups for the academic and non-academic subjects.

Table IX shows the total mean marks for all subjects and the total mean marks for academics by groups. An examination of this table shows that for each sub-group, the marks for total subjects were significantly higher than the marks in the academic subjects. This again emphasizes the findings reported in Tables VI and VII.

TABLE IX

COMPARISON OF TOTAL MEAN MARKS FOR ALL SUBJECTS AND TOTAL MEAN MARKS FOR ACADEMICS, BY GROUPS

		ALL SUBJECTS			ACADEMIC SUBJECTS			
	Number	Boys	Girls	Mean Total	Boys	Girls	Mean Total	Diff.
Graduates	59	2.93	2.97	2.95	2.62	2.67	2.64	.31*
12	13	2.83	2.66	2.74	2.52	2.32	2.41	.33*
11	46	2.56	2.61	2.58	2.30	2.28	2.29	.29*
10	66	2.47	2.59	2.53	2.16	2.30	2.23	.30*
9	110	2.45	2.67	2.56	2.14	2.38	2.26	.30*
8	60	2.36	2.56	2.46	2.08	2.27	2.18	.28*
TOTAL SAMPLE	354			2.61			2.31	

*Statistically significant at .01 level of confidence[4]

A comparison of the graduate group marks in academic subjects with the marks recorded for other groups in academic subjects is reported in Table X.

TABLE X

COMPARISON OF GRADUATE MEAN MARKS IN ACADEMICS WITH OTHER GROUPS MEAN MARKS IN ACADEMICS

Comparison	Graduates	Other Group	Difference
Grad vs Group 12	2.64	2.41	.23**
Grad vs Group 11	2.64	2.29	.35*
Grad vs Group 10	2.64	2.23	.41*
Grad vs Group 9	2.64	2.26	.38*
Grad vs Group 8	2.64	2.18	.46*

*Statistically significant at .01 level of confidence[4]
**Statistically significant at .05 level of confidence

In every comparison the mean mark for the graduates was higher than the mean mark of the other group, and in each case the difference emerged as statistically significant.

Comparisons of the mean marks in total subjects with mean marks in academic subjects, by grade level and sex, are reported for each group in Tables XI through XVI.

TABLE XI

COMPARISON OF MARKS FOR TOTAL SUBJECTS WITH MARKS FOR ACADEMIC SUBJECTS: GRADUATES

	ALL SUBJECTS Mean Marks			ACADEMIC SUBJECTS Mean Marks		
Level	Boys	Girls	Total	Boys	Girls	Total
Kgn.	3.10	3.40	3.25	2.80	2.90	2.85
1	3.00	3.00	3.00	2.60	2.30	2.45
2	3.06	3.03	3.04	3.05	2.73	2.89
3	2.83	2.96	2.89	2.78	2.75	2.76
4	2.88	2.84	2.86	2.75	2.78	2.76
5	2.94	2.79	2.86	2.73	2.60	2.66
6	2.99	2.91	2.95	2.86	2.74	2.80
7	2.82	2.66	2.75	2.46	2.52	2.49
8	2.94	2.95	2.94	2.77	2.70	2.73
9	2.56	3.06	2.80	2.15	2.73	2.44
10	3.01	3.03	3.02	2.33	2.68	2.50
11	3.02	2.81	2.91	2.30	2.55	2.43
12	3.01	3.12	3.08	2.48	2.73	2.60
Total Mean Marks	2.93	2.97	2.95	2.62	2.67	2.64

TABLE XII

COMPARISON OF MARKS FOR TOTAL SUBJECTS WITH MARKS FOR ACADEMIC SUBJECTS: GRADE 12 GROUP

	ALL SUBJECTS Mean Marks			ACADEMIC SUBJECTS Mean Marks		
Level	Boys	Girls	Total	Boys	Girls	Total
Kgn.	3.27	2.90	3.08	3.30	2.30	2.80
1	3.53	3.23	3.38	2.80	2.70	2.75
2	3.42	2.72	3.14	3.41	2.54	3.01
3	3.40	3.00	3.18	3.55	2.56	3.06
4	2.83	2.64	2.74	2.65	2.40	2.53
5	2.71	2.60	2.66	2.55	2.28	2.41
6	2.59	2.71	2.65	2.42	2.30	2.36
7	2.25	2.16	2.21	2.16	1.96	2.06
8	2.35	2.85	2.54	2.16	2.50	2.26
9	2.90	2.44	2.70	2.00	1.93	1.97
10	2.54	2.30	2.46	1.85	2.33	2.06
11	2.14	2.33	2.19	1.43	2.00	1.62
Total Mean Marks	2.83	2.66	2.74	2.52	2.32	2.41

TABLE XIII

COMPARISON OF MARKS FOR TOTAL SUBJECTS WITH MARKS FOR ACADEMIC SUBJECTS: GRADE 11 GROUP

	ALL SUBJECTS Mean Marks			ACADEMIC SUBJECTS Mean Marks		
Level	Boys	Girls	Total	Boys	Girls	Total
Kgn.	3.10	2.93	3.02	2.90	2.50	2.70
1	3.03	2.90	2.97	2.80	2.20	2.50
2	3.08	2.83	2.96	3.03	2.77	2.90
3	2.77	2.61	2.69	2.38	2.55	2.46
4	2.71	2.57	2.64	2.38	2.18	2.28
5	2.53	2.43	2.48	2.28	2.25	2.26
6	2.67	2.63	2.65	2.38	2.32	2.35
7	2.49	2.52	2.51	2.26	2.36	2.31
8	2.35	2.90	2.60	2.27	2.62	2.44
9	2.22	2.64	2.45	1.93	2.20	2.06
10	2.01	2.31	2.18	1.63	1.83	1.73
11	1.70	2.00	1.85	1.40	1.57	1.50
Total Mean Marks	2.56	2.61	2.58	2.30	2.28	2.29

TABLE XIV

COMPARISON OF MARKS FOR TOTAL SUBJECTS WITH MARKS FOR ACADEMIC SUBJECTS: GRADE 10 GROUP

Level	ALL SUBJECTS Mean Marks Boys	Girls	Total	ACADEMIC SUBJECTS Mean Marks Boys	Girls	Total
Kgn.	3.10	3.23	3.17	2.60	2.80	2.70
1	2.77	3.07	2.92	2.20	2.30	2.25
2	2.68	3.01	2.85	2.53	2.93	2.73
3	2.56	2.68	2.62	2.25	2.50	2.38
4	2.34	2.60	2.49	2.25	2.50	2.38
5	2.39	2.42	2.41	2.05	2.15	2.10
6	2.55	2.35	2.45	2.22	2.02	2.12
7	2.38	2.51	2.44	2.14	2.24	2.19
8	2.18	2.44	2.29	2.05	2.33	2.19
9	2.25	2.25	2.25	1.83	1.98	1.90
10	1.99	2.00	1.99	1.68	1.60	1.64
Total Mean Marks	2.47	2.59	2.53	2.16	2.30	2.23

TABLE XV

COMPARISON OF MARKS FOR TOTAL SUBJECTS WITH MARKS FOR ACADEMIC SUBJECTS: GRADE 9 GROUP

	ALL SUBJECTS Mean Marks			ACADEMIC SUBJECTS Mean Marks		
Level	Boys	Girls	Total	Boys	Girls	Total
Kgn.	3.00	3.37	3.18	2.80	3.00	2.90
1	2.77	2.70	2.73	2.10	2.10	2.10
2	2.83	2.99	2.92	2.70	2.73	2.71
3	2.44	2.90	2.67	2.15	2.70	2.43
4	2.47	2.68	2.58	1.88	2.40	2.14
5	2.28	2.68	2.48	1.88	2.25	2.06
6	2.58	2.70	2.64	2.36	2.48	2.42
7	2.52	2.71	2.61	2.26	2.44	2.35
8	2.07	2.46	2.26	2.02	2.42	2.22
9	1.54	1.49	1.52	1.20	1.25	1.23
Total Mean Marks	2.45	2.67	2.56	2.14	2.38	2.26

TABLE XVI

COMPARISON OF MARKS FOR TOTAL SUBJECTS WITH MARKS FOR ACADEMIC SUBJECTS: GRADE 8 GROUP

	ALL SUBJECTS Mean Marks			ACADEMIC SUBJECTS Mean Marks		
Level	Boys	Girls	Total	Boys	Girls	Total
Kgn.	2.77	2.97	2.87	2.60	2.50	2.55
1	2.57	3.13	2.85	2.10	2.50	2.30
2	2.38	2.47	2.42	1.93	2.10	2.01
3	2.31	2.60	2.46	2.03	2.45	2.24
4	2.22	2.44	2.32	1.95	2.13	2.04
5	2.44	2.19	2.32	2.15	2.25	2.20
6	2.45	2.50	2.47	2.14	2.26	2.20
7	2.38	2.41	2.39	2.12	2.16	2.14
8	1.73	2.37	2.04	1.73	2.10	1.90
Total Mean Marks	2.36	2.56	2.46	2.08	2.27	2.18

DIFFERENTIAL PERFORMANCE BY SUBJECT AREAS

Examination of marks in subjects makes it possible to identify those areas of best and weakest performance as indicated by marks assigned by teachers. This information should have significance since it would help to identify those areas in which modification would need to be made in order to adapt the program as efficiently as possible to the needs and abilities of the pupils. In consideration of this point, it is desirable to refer to Tables VI and VII.

Table VI shows those subjects for which the pupils received mean marks of 3.0 and above, thus indicating average performance. Perusal of Table VI emphatically reveals the areas in which the pupils had been consistently most successful. According to this table, Music, Physical Education, Art and Industrial Arts are subjects in which these pupils experienced the greatest success. This holds true for all groups at all grade levels except kindergarten and first grade. For the graduating group, this successful experience with these subjects extends clear through the twelfth grade. As the grade of withdrawal decreases, it becomes apparent that although many of the same subject areas are included as areas of successful performance, there were some areas where no mean marks of average were recorded. Specifically, this refers to groups 9 and 8 where there were no subjects for which average marks were recorded in the fifth grade.

Any adaptation of the curriculum should take into account these subject areas. It may not mean that more work in these subjects should necessarily be offered. On the other hand, it does seem to indicate that the apparent lack of success in the subjects identified as academic subjects points to the need for modification and adaptation of the course offerings in those areas, and it indicates further that this adaptation needs to be effected early in the school sequence. Since this study is concerned with secondary school age pupils, the indication is clear that a modified program should be available to them upon entering the secondary school.

The other side of the picture, showing the areas of poorest performance, may be obtained from Table VII. It is significant that in Table VII there was no grade for which the graduates, as a group, had mean marks of F; and it may be just as significant that, as a group, the grade 8 withdrawals encountered failure as early as the second grade. During the elementary school years, the subjects in which the pupils were most likely to be unsuccessful were Numbers and Language. In the high school years this likelihood is extended to virtually all subjects in the year of withdrawal or the year immediately preceding withdrawal.

PERSONAL RELATIONSHIPS

One of the sections of the cumulative record card carries ratings on personal traits. These ratings are recorded by the teacher near the close of each school year. The rating scale is from one to five, with five being the high rating. Seven in number, these traits include: (1) Participation in Group Activity, (2) Attitude Toward School Regulations, (3) Appearance, (4) Dependability, (5) Emotional Stability, (6) Initiative, and (7) Cooperation. The ratings recorded for the pupils in the sample were tabulated and analyzed according to groups. The results of this tabulation are reported as mean ratings in Table XVII.

The mean ratings reported in Table XVII reflect the mean as based upon the ratings in each trait for all the years for which ratings were recorded. For example, in "Participation in Group Activities", the graduating group had a mean rating of 3.44 showing that over the course of their school experience the ratings had averaged in the middle range. With the exception

TABLE XVII

MEAN RATINGS ON PERSONAL TRAITS IN ELEMENTARY SCHOOL BY TRAIT, GROUP, AND SEX

Trait		Grad.	12	11	10	9	8
Participation in Group Activity	T	3.44	3.45	3.22	2.97	2.90	2.98
	B	3.5	3.7	3.3	2.9	2.8	2.9
	G	3.4	3.0	3.1	3.1	3.2	3.1
		.1*	.7	.2	- .2	- .4	- .2
Attitude Toward School Regulations	T	4.13	4.01	3.51	3.32	3.30	3.29
	B	4.2	3.8	3.0	3.0	3.1	3.0
	G	4.1	4.4	4.0	3.7	3.7	3.8
		.1	- .6	-1.0	- .7	- .6	- .8
Appearance	T	4.05	3.88	3.71	3.55	3.22	3.38
	B	4.2	4.1	3.7	3.5	3.2	3.3
	G	4.0	3.4	3.8	3.7	3.4	3.5
		.2	.7	- .1	- .2	- .2	- .2
Dependability	T	3.90	3.73	3.27	3.09	2.86	3.00
	B	3.9	3.6	3.1	2.8	2.8	2.7
	G	3.9	4.1	3.4	3.5	3.4	3.5
		.0	- .5	- .3	- .7	- .6	- .8
Emotional Stability	T	3.53	3.66	3.24	3.13	3.14	3.08
	B	3.6	3.4	3.0	2.9	3.0	2.8
	G	3.5	4.2	3.4	3.4	3.4	3.5
		.1	- .8	- .4	- .5	- .4	- .7
Initiative	T	2.90	2.78	2.49	2.40	2.35	2.26
	B	2.9	2.9	2.4	2.3	2.2	2.1
	G	2.9	2.6	2.6	2.8	2.6	2.5
		.0	.3	- .2	- .5	- .4	- .4
Cooperation	T	3.70	3.65	3.35	3.16	3.11	3.11
	B	3.7	3.5	3.2	2.9	3.0	2.9
	G	3.7	4.0	3.5	3.6	3.4	3.4
		.0	- .5	- .3	- .7	- .4	- .5
$\bar{X}$ Combined Traits	T	3.68	3.57	3.26	3.09	2.98	3.01
	B	3.72	3.56	3.09	2.91	2.87	2.80
	G	3.66	3.62	3.40	3.36	3.29	3.35

* Difference - boys minus girls

of the grade 9 group, the mean ratings show progressive decline as the grade of withdrawal decreased. This indicates that there is some relationship between teacher ratings on "Participation in Group Activities" and continuance in school. Ratings on "Attitude Toward School Regulations" show that the graduates and group 12 had achieved above average ratings. Mean ratings for the other groups involved showed ratings in the average range with decreasing magnitude as the grade of withdrawal lowers. All of the ratings on "Appearance" were in the average range, except those for the graduating group, and here once again the graduating group was rated slightly above average. For the ratings on "Dependability" all of the groups had average ratings except group 9 which was slightly below average. Even though the ratings were in the average range, the difference between the highest rating for graduates and the lowest average rating for group 8 represent an area of almost one scale unit. Ratings on "Emotional Stability" were in the average range. Apparently these pupils did not show much initiative in their school work, since their teachers gave them ratings of below average. This was true for all groups including the graduates. Ratings on "Cooperation" show an average rating for all groups with the now usual progressive decrease in magnitude associated with decreasing grade of withdrawal.

In order to obtain an index of statistical relationship reflecting the relationship between ratings on personal traits and continuance in school, the contingency coefficient[3] was calculated. Ratings on personal traits were trichotomized as "above average", "average", and "below average". The result was a C = .43, which indicates some degree of positive relationship between teacher ratings on personal traits and continuance in school.

In summary, it appears that in most instances mean ratings were in the average range. However, there are some notable exceptions and it is these exceptions which justify closer scrutiny. In looking at the mean ratings for the graduate group, the evidence is that they were rated above average in "Attitude Toward School" and "Appearance", and only in "Initiative" were the graduates rated below average. For group 12 the ratings showed a similar pattern to the graduates, except that group 12 achieved only one rating above average and that was in "Attitude Toward School Regulations". All of the groups were rated below average in "Initiative".

The implication of these ratings is that the graduating group appears to be composed of those pupils who had a good attitude toward school and who presented a nice appearance.

Mean ratings were calculated also for each group by sex. Of forty-two ratings in Table XVII, thirty-one (73.81%) were in favor of the girls, eight (19.05%) were in favor of the boys, and three (7.14%) showed no difference. These differences between the sexes ranged from zero to one full scale unit. The indication here is that girls generally are more successful in achieving higher ratings on personal characteristics. This may reflect one of the reasons why the graduating group included a higher percentage of girls even though the total sample contained a greater number of boys. In the trait "Attitude Toward School Regulations", the girls rated higher than the boys for every group except the graduates. For the graduates, the boys were rated .1 point higher than the girls; a very small difference. However, of the other groups, the amount by which the ratings for the girls exceeded the ratings for the boys was substantial. This emphasizes the statement made earlier that "Attitude Toward School Regulations" appears to be a very important aspect of continuance in school, and also shows that the girls are more successful than the boys in achieving higher ratings in this area.

TABLE XVIII

MEAN RATINGS ON COMBINED PERSONAL TRAITS BY GRADE, SEX AND GROUP

Grade Level		GROUP					
		Grad	12	11	10	9	8
2*	Total	3.63	3.43	3.34	3.24	3.19	2.72
	Boys	3.4	3.4	3.4	3.1	2.9	2.8
	Girls	3.8	3.6	3.3	3.4	3.6	2.6
3	Total	3.59	3.77	3.22	3.20	3.09	3.01
	Boys	3.5	3.5	3.0	3.1	2.9	2.8
	Girls	3.6	4.0	3.4	3.3	3.5	3.4
4	Total	3.63	3.51	3.25	3.23	2.88	2.85
	Boys	3.8	3.6	3.1	3.1	2.8	2.7
	Girls	3.5	3.4	3.3	3.4	3.1	3.1
5	Total	3.68	3.66	3.16	3.12	2.94	3.05
	Boys	3.9	3.6	3.1	3.0	2.8	2.9
	Girls	3.6	3.7	3.2	3.4	3.2	3.4
6	Total	3.81	3.70	3.32	3.13	3.08	3.06
	Boys	4.0	3.7	3.2	3.0	3.0	2.9
	Girls	3.7	3.7	3.4	3.3	3.4	3.4
7	Total	3.80	3.53	3.42	2.99	3.06	3.16
	Boys	3.8	3.5	3.3	2.7	2.9	3.0
	Girls	3.8	3.6	3.5	3.5	3.4	3.4
8	Total	3.57	3.49	3.27	3.01	2.92	2.54
	Boys	3.5	3.6	2.9	2.9	2.6	2.3
	Girls	3.6	3.4	3.5	3.2	3.4	3.0
9	Total	3.46	3.17	3.09	2.85	2.41	
	Boys	3.2	2.9	2.9	2.7	2.3	
	Girls	3.7	3.7	3.2	3.1	2.6	
10	Total	3.52	2.88	2.99	2.38		
	Boys	3.4	2.9	2.8	2.1		
	Girls	3.6	2.8	3.1	2.9		
11	Total	3.43	2.88	2.66			
	Boys	3.4	2.8	2.6			
	Girls	3.5	3.2	2.8			
12	Total	3.60	2.26				
	Boys	3.6	2.1				
	Girls	3.6	3.0				

*Kindergarten and Grade 1 not included.

Mean ratings on combined personal traits were computed for each group at each grade level available. This allows a longitudinal view of the experience of these children as they move from grade to grade through the school. These mean ratings are reported in Table XVIII.

Examination of Table XVIII shows the now familiar pattern of decreasing magnitude with progressive decrease in grade of withdrawal. This table allows a view of mean ratings beginning in the second grade. For the graduating group, the rating of 3.63 in the second grade apparently would have served as a reasonable predictor of later ratings, since succeeding ratings hover around the high-average range through the twelfth grade. The grade 12 group had a rating almost as high as the graduate group in the second grade, and in the third grade the rating was even higher. However, in the succeeding years, particularly beginning with grade 9, the grade 12 group ratings decreased, so that by the year of withdrawal and the two years immediately preceding it, their mean ratings were below average. The same general pattern obtains for each of the other groups, indicating that in the early years in school they had achieved average or near average ratings, but that by the year of withdrawal their ratings had fallen below average.

The implication seems clear that there is a definite, positive relationship between maintaining average or better ratings on personal traits and continuance in school.

PROGRESSION IN GRADES

Failure to master the material at any given grade level is likely to result in the pupil being asked to repeat that grade the following year. When this happens it undoubtedly has its effect upon the feeling of the pupil with respect to his success in school, and repeated failure experienced year after year is likely to lead to a feeling of inadequacy so far as the school setting is concerned. The concern here was whether or not the pupils in the sample were ones who had been successful or unsuccessful in school, and the extent to which this lack of success may be reflected in the year of withdrawal from school. If it should be found that those pupils who withdrew from school early were those who had been least successful in maintaining regular grade to grade progression, then this should indicate a positive relationship between academic success, as indicated by regular grade progression, and early withdrawal from school.

The school records for the pupils included in this sample were studied with the intent of identifying those years in which grades had been repeated. After these data were accumulated they were tabulated so that comparisons could be made among the categories in the sample as to their respective success in school. This information is reported in Table XIX, showing by group and sex, the number of times each grade was repeated through the ninth grade. From this table it can be noted that for the graduating group there were some twelve pupils who repeated a grade somewhere during their school experience. When the total number of years repeated was calculated and compared with the number of pupils who had repeated, it was found that the average grades repeated per pupil for the graduating group was 1.25 years. For the grade 12 group this average decreases slightly to 1.0 years per pupil. Examination of the remaining groups shows an average of 1.27 for the grade 11 group, 2.08 for the grade 10 group, 1.64 for the grade 9 group, and 1.78 for the grade 8 group. Computation of the average number of years repeated per pupil for the total sample reveals that 1.64 years repeated represents the average for the total sample. It should be noted that the grade 12 withdrawal group was a very small group, and the 1.0 years repeating

TABLE XIX

GRADES REPEATED BY GRADE, GROUP, AND SEX

GRADE REPEATED	Graduate B	Graduate G	12 B	12 G	11 B	11 G	10 B	10 G	9 B	9 G	8 B	8 G	Total B	Total G	Total Years
Kgn						1	1		5		3	3	9	4	13
1	3*	2	1		3	1	8	2	20	6	13	4	48	15	63
2	2	3			2		7	4	13	4	7	4	31	15	46
3	1			1	5	1	10	6	6	4	8	3	30	15	45
4		1			1	5	3	2	5	3	6	2	15	13	28
5		1			1	2			4	1		1	5	5	10
6		2	1		1	2	2		4	1		1	8	6	14
7						1	1		3	1			4	2	6
8						1	5	3	9	1	6	3	20	8	28
9						1								1	1
Σ Years Repeated	6	9	2	1	13	15	37	17	69	21	43	21	170	84	254
No. Pupils	5	7	2	1	9	13	14	12	41	14	24	13	95	60	155
Average	1.25		1.00		1.27		2.08		1.64		1.78				1.64
% of Group	20.35		23.08		47.83		39.39		50.00		61.66				43.79

*Read as three boys in graduate group repeated grade one per pupil probably should not be interpreted as meaning that, as a group, they were more successful than the graduates in maintaining grade to grade progression.

Another piece of information that is of interest is indicated in the percentage of each group who had at some time during their school experience repeated a grade in school. Examination of these percentages indicates a definite trend. With one exception the progression is from the lower percentage for the graduating group to the higher percentage for the grade 8 group. The one exception in this trend is for the grade 11 group where the percentage of pupils who had failed to make regular progression was greater than for the grade 10 group. In studying these percentages, it appears that although approximately 20 per cent of those in the graduating group had failed a grade at some time during their school experience, they were able to maintain their motivation, and to move on to eventual graduation. At the other end of the scale, more than 61 per cent of the grade 8 group had experienced failure. For the grade 9 group, 50 per cent of them had repeated a grade.

Another point of interest has to do with the year in school in which failure is most likely to occur. Based upon the results of the tabulation for the sample, it is clear that the incidence of failure is greatest in the primary school, and that the first grade particularly is a most difficult time. Inspection of the other values under the column headed "Total" in Table XIX, shows that there is a progressive decline in the number of pupils retained by grade level from grade one through grade seven. In grade eight there is an upward swing in the number of pupils retained, so that at the grade eight level the number of pupils was the same as at the grade four level. Apparently the intermediate grades of five and six are not those grades where pupils are most likely to be retained.

In summary, there does appear to be a definite relationship between number of years retained in grade and early withdrawal from school, and in addition, it appears that the time that the pupils are most likely to experience this failure is during the primary grades.

ELEMENTARY SCHOOL SPECIAL EDUCATION EXPERIENCE

One of the questions that recurs from time to time is concerned with whether or not experience in an elementary school program for educable mentally retarded pupils will contribute toward their continuing in school after they have left the elementary special education program. For the pupils in this sample, all of whom would qualify for special education placement in classes for educable mentally retarded in this city, the number who had actually been in such a program was tabulated according to groups. The results of this tabulation are reported in Table XX. Table XX shows the number of pupils in each group who had had special education experience in the elementary school, and the per cent of that group that is represented by this number of pupils. Also it shows the mean number of years spent in the special education program by groups. Examination of Table XX reveals that with the exception of the grade 12 group, all of the groups, 9 through graduate, spent approximately two to two and one-half years in special education during their elementary school experience. The notable exception to this is for the grade 8 group where the mean number of years in special education is reported as 3.54. This is substantially higher than the mean number of years spent in special education by the other groups. Further examination of Table XX shows that the graduating group had the lowest per cent of pupils in special education during the elementary school, and that the highest percentage of pupils with special education experience was re-

TABLE XX

PUPILS IN SPECIAL EDUCATION PROGRAM BY GROUPS

	Male				Female				Total			
Group	Grp. N	No. Sp.	% Sp.	$\overline{X}$ Yrs Spec.	Grp. N	No. Sp.	% Sp.	$\overline{X}$ Yrs Spec.	Grp. N	No. Sp.	% Sp.	$\overline{X}$ Yrs Spec.
Grads.	25	11	44	2.09	34	16	47	1.94	59	27	22	2.00
Group 12	9	3	33	1.33	4	2	50	1.00	13	5	38	1.20
Group 11	21	8	38	2.50	25	16	64	1.75	46	24	52	2.00
Group 10	41	21	51	2.52	25	12	48	2.50	66	33	50	2.52
Group 9	74	41	55	2.49	36	18	50	1.94	110	59	54	2.32
Group 8	38	16	42	4.06	22	8	36	2.50	60	24	40	3.54
Totals	208	100	48	2.67	146	72	49	2.03	354	172	49	2.40

corded for the grade 9 group. Thus, it appears that some relationship between experience in elementary school special education and early withdrawal from school did exist.

It has been noted earlier that when pupils have completed their experience in the elementary school special education program and enter the secondary school, that there has been no special provision available to them. The result has been that, upon entering the secondary school, these pupils had either to take the regular academic program or to withdraw from school. Apparently those who have had the elementary school experience in special education have found it more difficult to adjust to the secondary school, and the result has been an early withdrawal. This should not be construed as a criticism of the elementary school program in special education, since philosophically the program has de-emphasized academic performance, and has, instead, attempted to concentrate upon areas of adjustment and personal relations. Thus it may be that the shock of suddenly discovering themselves in competition with pupils of greater ability in the academic areas has intensified feelings of frustration and failure which appear to be associated with early withdrawal from school.

PUPIL MOBILITY

It has long been an assumption that children who continue attendance in the same school year after year have been able to form associations and to establish roots that will contribute to their stability so far as continuance in school is concerned. In an effort to explore this aspect of the general question of factors associated with continuance in school, a tabulation was made of the number of elementary schools attended for each pupil in the sample. Unless there was contrary evidence, time spent outside Kansas City was counted as attendance in one school. The results of this tabulation are reported in Table XXI.

TABLE XXI

MEAN NUMBER OF ELEMENTARY SCHOOLS ATTENDED

Group	Total	Boys	Girls
Graduates	1.91	1.96	1.88
Group 12	2.08	2.00	2.25
Group 11	2.09	2.24	1.96
Group 10	2.72	2.76	2.67
Group 9	2.76	2.81	2.66
Group 8	2.92	2.76	3.18
Total	2.53	2.59	2.43

While no data are at present available as to the mobility rate for pupils in the greater Kansas City area, it is feasible to compare the pupils in the graduating group with the pupils in the other groups to discover if those who had held on until graduation were those who had been less mobile. The hypothesis was that pupils with the lowest mobility rate would be those pupils who are most likely to continue in school. Examination of the information reported in Table XXI tends to support this hypothesis, since there is a definite trend identifiable when the mean number of elementary schools attended for each of the groups is considered. The pupils in the graduating group attended fewer schools than the pupils in any of the other groups. The pupils with the highest mobility rate were those in the grade 8 group, where the mean number of elementary schools attended was established as 2.92. The average for the total sample was 2.53, which falls between the mean for the grade 11 group and the mean for the grade 10 group.

Attempts to study the mobility factor in secondary schools are less rewarding. There a built-in bias was present in that those pupils who withdrew early had less opportunity to move from school to school than did the pupils who went on to graduation.

MEASURED ACHIEVEMENT

In order to obtain an estimate of achievement that would be independent of teacher marks in subjects, the standardized achievement test results for the pupils in this sample were obtained and tabulated. The areas of achievement chosen for inclusion were reading, arithmetic, language, spelling, social studies and science.

In Kansas City, achievement test results are reported on the cumulative record card as relative scores. Some explanation of the relative score as used here is appropriate. The relative score range is from one to six, with the relative score six being the highest. Each relative score is described in terms of a centile range. The relative score scale, with its centile equivalents is given below.

TABLE XXII

CENTILE EQUIVALENTS FOR RELATIVE SCORES

RELATIVE SCORE	CENTILE RANGE	RELATIVE SCORE	CENTILE RANGE
6	93+	3	31 - 49
5	69 - 92	2	7 - 30
4	50 - 68	1	- 6

Mean relative scores were calculated for each subject area at each grade level by group, and are reported in Table XXIII. Examination of Table XXIII shows that in general the mean relative scores are quite low. This would be

TABLE XXIII

ACHIEVEMENT TEST MEAN RELATIVE SCORES

	GROUP					
Subject	Grad	12	11	10	9	8
READING						
Grade 3	2.67	-	1.81	2.11	1.89	1.91
Grade 6	2.06	2.00	1.76	1.59	1.59	1.78
Grade 7	1.83	1.89	1.45	1.40	1.62	1.69
Grade 8	1.70	1.38	1.57	1.55	1.35	1.00
ARITHMETIC						
Grade 4	1.67	-	1.58	1.76	1.83	1.64
Grade 6	2.13	1.63	1.90	1.97	1.76	1.57
Grade 8	1.93	1.38	1.81	1.52	1.43	-
LANGUAGE						
Grade 5	2.32	2.00	1.96	1.63	1.70	1.64
Grade 8	2.17	1.63	1.89	1.64	1.34	1.33
SPELLING						
Grade 5	3.50	3.00	2.11	1.59	2.11	2.67
Grade 7	2.50	1.67	2.00	1.65	1.77	2.50
SOCIAL STUDIES						
Grade 5	2.33	2.17	1.93	1.86	1.87	1.86
SCIENCE						
Grade 7	2.21	1.83	2.03	1.73	1.78	1.75

expected in view of the nature of the sample. In only two instances did the mean relative score reach the three level. These were both in spelling. One was for the graduates, the other for the grade 12 group. Both were at the fifth grade level.

Comparison of the graduate mean relative scores with the mean relative scores recorded for the other sub-groups indicates that, with few exceptions, the graduates scored slightly higher than the other sub-groups. This corresponds with the teacher marks in subjects where the graduates were able to maintain minimum passing performance throughout their school experience. In those subject areas such as reading and arithmetic where a series of scores covering several years was available, the general pattern is that the mean relative scores decrease at the higher grade levels.

EXTRA-CURRICULAR ACTIVITIES

One of the elements in the school setting that it was thought might be associated with continuance in school is the extent to which pupils participated in extra-curricular activites. The approach here was to ask the pupils that were interviewed to indicate the extra-curricular activities in which they had participated during their school experience. The responses given by the pupils during the interview were tabulated according to group and are reported in Table XXIV according to the number of activities indicated.

Examination of Table XXIV indicates that the pupils in the graduating group had participated in more activities per pupil than the pupils in any of the other groups. Conversely, the pupils in the grade 8 group reported that they had participated in fewer activities than any other group. For the groups between the graduating group and the grade 8 group, there appears to be no consistent trend. This is indicated by the fact that the grade 10

TABLE XXIV

NUMBER OF EXTRA-CURRICULAR ACTIVITIES REPORTED, BY SEX

	Grad	12	11	10	9	8	Total
BOYS							
Number of Activities	18	5	7	27	32	2	91
Number of Pupils	20	8	15	31	51	25	150
$\overline{X}$ per Pupil	.90	.63	.47	.87	.63	.08	.61
% None Activities	40	63	60	32	55	88	55
GIRLS							
Number of Activities	34	2	16	4	1	1	58
Number of Pupils	28	3	24	13	18	7	93
$\overline{X}$ per Pupil	1.21	.67	.67	.31	.06	.14	.62
% None Activities	43	67	67	54	94	86	65
TOTAL							
Number of Activities	52	7	23	31	33	3	149
Number of Pupils	48	11	39	44	69	32	243
$\overline{X}$ per Pupil	1.08	.64	.59	.70	.48	.09	.61
% None Activities	42	64	64	39	65	88	58

group had a mean number of activities per pupil second only to the graduating group. From the evidence reported here it appears that the two groups at the extremes are the only ones where the deviation from the other findings would appear to be significant. On this basis participation in very few activities appears to be associated with early withdrawal, while participation in more activities appears to be associated with graduation.

Examination of the actual activities reported by the former pupils failed to reveal any pattern of specific activities that could be related to continuance in school. It was noted, however, that there were numerous pupils who reported having participated in no extra-curricular activity. The number of pupils in each group who had reported no participation in any activity were tabulated by groups and are reported in Table XXIV as per cent of each group. The group with the highest percentage of "no activity" pupils was group 8 where 88 per cent of the pupils in that group indicated that they had not participated in any extra-curricular activity. For the graduating group only 42 per cent had reported no participation. Of the intermediate groups, the grade 10 group is markedly different from the other intermediate groups in that the per cent of pupils reporting no participation is lower even than the graduating group.

The reader has probably noted that no definition for extra-curricular activities has been presented. This omission is purposeful, because it was felt that more valid information would be gained if the pupils were left free choice as to the activities they would choose to report. This factor would undoubtedly influence the validity of the findings so far as a strict definition of extra-curricular activities is concerned. However, this does represent a statement of the extent to which the pupils felt they had participated in school activities.

FACTORS IN COMMUNITY OPERATION

Any consideration of factors associated with school holding power should take into account evidence that may be available concerning the manner in which the pupils under consideration operate in the community. Here this factor was studied with an investigation into the incidence of pupil involvement with the Juvenile Court, and an inquiry concerning special interests and hobbies.

JUVENILE COURT

One of the variables which reflects community operation is the incidence of contact with the Juvenile Court. Jackson County Juvenile Court records were made available so that they could be searched for any evidence that the pupils in the sample had been involved with the Juvenile Court.

The search indicated that the pupils had indeed been involved in Juvenile Court appearances. For the total sample of 354 children, it was discovered that almost 31 per cent had at one time or another appeared in Juvenile Court. Although there are no data that show the incidence of Juvenile Court appearance for the student body as a whole, it is probable that 31 per cent of the pupils represents a proportion well above average. In terms of actual numbers of pupils, it was found that 109 had a record of appearance in Juvenile Court. Of these 109 pupils, 81 (74 per cent) were boys and 28 (26 per cent) were girls. Information by type of record, group and sex is reported in Table XXV.

The first question explored was concerned with whether or not the pupils in the graduating group had had a greater incidence of appearance in the Juvenile Court than pupils in the other groups. If the pupils in the early withdrawal groups contributed a higher proportion of Juvenile Court appearances than the pupils in the graduating group, assumption could be made that a relationship did exist between Juvenile Court record and continuance in school. Investigation revealed that, with the exception of the grade 12 group, there did appear to be a relationship between incidence of Juvenile Court record and continuance in school. This is indicated by the fact that the graduating group contributed only 6.78 per cent of their total number to appearances in Juvenile Court, whereas the grade 9 and grade 8 groups contributed approximately 40 per cent of their

TABLE XXV

INCIDENCE OF APPEARANCES IN JUVENILE COURT

Group	Number Charges	Number Non-Charge	Total Pupils	Per cent of Group	Apperance per Pupil
Graduates	1	3	4	6.78	1.00
Group 12	0	0	0	--	--
Group 11	17	1	13	28.26	1.38
Group 10	22	7	23	34.85	1.26
Group 9	58	14	45	40.91	1.62
Group 8	30	9	24	40.00	1.63
Total	128	34	109	30.79	1.49

respective groups. Furthermore, the trend is definite in that a sharp rise in the incidence of Juvenile Court appearances, as reflected by percentage of group with such records, occurs between the graduating group and the grade 11 group. In addition, it can be seen from Table XXV, that the graduating group contributed fewer appearances per pupil than did the other groups. Application of the contingency coefficient as an estimate of statistical relationship revealed C = .27 between the incidence of record in Juvenile Court and continance in school.

Examination of the incidence of appearances in Juvenile Court led to the question as to the reason for these appearances. Type of record, by group and sex, is reported in Table XXVI. The reasons for Juvenile Court appearance fall under two general classifications. The first of these classifications includes those appearances that involve actual charges, where the pupils had been involved in actual violations. The second type of classification is based upon non-charge appearances. These include appearances that arise from parental neglect, improper home conditions, questions of custody and improper home care. For the non-charge appearances, the pupils were in court for no apparent reason of their own, but rather, that they had been involved as a result of the activities of adults in their immediate environment. Examination of the records shows that of 162 pupil appearances, some 128 were charges and 34 were non-charge. Percentage-wise, this indicates that slightly more than 79 per cent were charges, leaving approximately 21 per cent as non-charge. Accordingly, the great bulk of appearances in Juvenile Court were as a result of some violation.

The most frequent charge associated with appearance in Juvenile Court was larceny. The next four charges in order of frequency of record were truancy, auto theft, beyond parental control and runaway. Of the non-charge appearances, the most frequently given reason was neglect, followed by improper care. In only three cases was custody a reason for appearance in Juvenile Court. The summary of the tabulations of most frequent type of court record is reported in Table XXVII.

After the apparent relationship between incidence of Juvenile Court record and continuance in school had been established, the question that arose next involved an inquiry into the chronological age in which the initial contact with the Court had been made. If it should be discovered that early withdrawal groups had had early initial contact with the Juvenile Court, then early contact might serve as a predictive element. The results of the tabulation of chronological age at the time of first Court record is reported in Table XXVIII. Examination of Table XXVIII shows that there is an apparent relationship between chronological age at beginning of Court record and continuance in school. Calculation of the con-

TABLE XXVI

INCIDENCE OF COURT RECORDS BY TYPE OF RECORD, GROUP AND SEX

	BOYS		GIRLS		TOTAL		PER CENT OF GROUP
	No. Rec.	No. Boys	No. Rec.	No. Girls	No. Rec.	No. Pupils	
TOTAL SAMPLE - COURT REC.	128	81	34	28	162	109	30.79
GRADUATE COURT RECORDS	1	1	3	3	4	4	6.78
Neglect	1		1		2		
Runaway			1		1		
Improper Home Conditions			1		1		
GROUP 12 - NO COURT RECORDS							
GROUP 11 - COURT RECORDS	15	10	3	3	18	13	28.26
Larceny	6				6		
Sex	2		1		3		
Truancy	2				2		
Runaway	1		1		2		
Shoplifting	1				1		
Personal Injury	1				1		
Traffic Violation	1				1		
Breaking & Entering	1				1		
Neglect			1		1		
GROUP 10 - COURT RECORDS	22	17	7	6	29	23	34.85
Auto Theft	5				5		
Neglect	1		3		4		
Larceny	3				3		
Truancy	2		1		3		
Robbery	2				2		
Traffic Violation	2				2		
Shot Girl	1				1		
Assault	1				1		
Neighborhood Disturbance	1				1		
Breaking & Entering	1				1		
Improper Care	1				1		
Beyond Parental Control	1				1		
Burglary	1				1		
Runaway			1		1		
Improper Home Conditions			1		1		
Custody, Question of			1		1		

(TABLE XXVI contin.---)

	BOYS		GIRLS		TOTAL		PER CENT
	No. Rec.	No. Boys	No. Rec.	No. Girls	No. Rec.	No. Pupils	OF GROUP
GROUP 9 - COURT RECORDS	63	37	9	8	72	45	40.91
Larceny	12		1		13		
Auto Theft	11				11		
Beyond Parental Control	7		1		8		
Neglect	4		3		7		
Improper Home Conditions	3		3		6		
Truancy	5				5		
Breaking & Entering	5				5		
Runaway	4				4		
Robbery	2		1		3		
Sex	3				3		
Carelessness or Mischief	2				2		
Custody, Question of	1				1		
Shoplifting	1				1		
Personal Adjustment	1				1		
Vandalism	1				1		
Traffic	1				1		
GROUP 8 - COURT RECORDS	27	16	12	8	39	24	40.00
Truancy	4		3		7		
Neglect	3		2		5		
Beyond Parental Control			4		4		
Runaway	3				3		
Vandalism	2				2		
Larceny	2				2		
Improper Home Conditions	1		1		2		
Traffic Violation	2				2		
Breaking & Entering	2				2		
Theft	1				1		
Mail Theft	1				1		
Shoplifting	1				1		
Carelessness or Mischief	1				1		
Custody, Question of	1				1		
Burglary	1				1		
Liquor or Drugs	1				1		
Robbery	1				1		
Consent to Marry			1		1		
Sex			1		1		

TABLE XXVII

MOST FREQUENT TYPE OF COURT RECORD BY GROUP AND SEX

Type of Record in Order of Frequency	Grads			* Group 11			Group 10			Group 9			Group 8			Total		
	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T
1. Larceny				6		6	3		3	12	1	13	2		2	23	1	24
2. Neglect	1	1	2		1	1	1	3	4	4	3	7	3	2	5	9	10	19
3. Truancy				2		2	2	1	3	5		5	4	3	7	13	4	17
4. Auto Theft							5		5	11		11				16	0	16
5. Beyond Parental Control							1		1	7	1	8		4	4	8	5	13
6. Runaway		1	1	1	1	2		1	1	4		4	3		3	8	3	11
7. Improper Home Conditions		1	1					1	1	3	3	6	1	1	2	4	6	10
8. Breaking and Entering				1		1	1		1	5		5	2		2	9	0	9
9. Sex				2	1	3				3		3		1	1	5	2	7
10. Robbery							2		2	2	1	3	1		1	5	1	6
11. Traffic Violation				1		1	2		2	1		1	2		2	6	0	6
12. Shoplifting				1		1				1		1	1		1	3	0	3
13. Custody, Question of								1	1	1		1	1		1	2	1	3
14. Vandalism										1		1	2		2	3	0	3
15. Carelessness or Mischief										2		2	1		1	3	0	3
16. Burglary							1		1				1		1	2	0	2
17. Personal Injury				1		1										1	0	1
18. Shot Girl							1		1							1	0	1
19. Assault							1		1							1	0	1
20. Neighborhood Disturbance							1		1							1	0	1
21. Improper Care							1		1							1	0	1
22. Personal Adjustment										1		1				1	0	1
23. Theft													1		1	1	0	1
24. Mail Theft													1		1	1	0	1
25. Liquor or Drugs													1		1	1	0	1
26. Consent to Marry														1	1	0	1	1
Totals	1	3	4	15	3	18	22	7	29	63	9	72	27	12	39	128	34	162
Percentage of Total Records			2.47			11.11			17.90			44.44			24.08	79.01	20.99	100.00

* Group 12 had no court records.

tingency coefficient indicates that the statistical relationship is in the magnitude of C = .34.

TABLE XXVIII

CHRONOLOGICAL AGE AT BEGINNING OF COURT RECORD

	Chronological Age														
	5	6	7	8	9	10	11	12	13	14	15	16	17	19	?	Total
Grad					1		1				1	1				4
Group 12				NONE												-
Group 11								3	3	2		3	2			13
Group 10		2			3			5	1	3	4	4			1	23
Group 9	1	2		1	3	3	2	3	4	6	8	5	5	1	1	45
Group 8			1	2	1		1	2	3	4	2	5			3	24
Total	1	4	1	3	8	3	4	13	11	15	15	18	7	1	5	109

In addition to the information concerning chronological age at beginning of Court record, a tabulation was also made of the grade at beginning of Court record. The result of this tabulation is reported in Table XXIX.

From Table XXIX it can be seen that, of those pupils with Court records, slightly more than one-fifth had their first contact with Juvenile Court at the eighth grade level. The apparent relationship noted earlier between the chronological age at beginning of Court record and early withdrawal from school is emphasized here in that those groups who withdrew early also afforded the largest number of pupils who had initial Court contact in the early grades. The statistical relationship was found to be C = .28.

It may be recalled that an earlier section of this report noted the relationship that appears to exist between experience in elementary school special education programs and early withdrawal from school. In order to

TABLE XXIX

GRADE AT BEGINNING OF COURT RECORD

	Kgn	1	2	3	4	5	6	7	8	9	10	Sp	WD	?	Total
Grad				1					1		1	1			4
Group 12			NONE												-
Group 11						3	1	2	2		1	1	3		13
Group 10	1		2	1	2	2	1	1	5	3	1	2		2	23
Group 9	1	2	1	4	1	3	3	3	10	4		5	4	4	45
Group 8	2		1	1	1	1	2	2	4	1		3	4	2	24
Total	4	2	4	7	4	9	7	8	22	8	3	12	11	8	109

explore further relationships associated with experience in elementary school special education, a tabulation was made of the number of pupils with records in Juvenile Court who also had had experience in elementary school special education. The results of this tabulation are reported in Table XXX.

TABLE XXX

PUPILS IN SPECIAL EDUCATION HAVING JUVENILE COURT RECORDS

Group	No. in Group	Total No. Sp. Ed.	Total Pupil Court Records	Number Sp. Ed.	% Group in Sp. Ed.
Graduates	59	27	4	3	75.0
Grade 12	13	5	None		
Grade 11	46	24	13	4	30.8
Grade 10	66	33	23	13	56.5
Grade 9	110	59	45	25	55.6
Grade 8	60	24	24	9	37.5
Total	354	172	109	54	49.5

There it can be seen that of the 109 pupils with Court records, some 54 of them had been in special education program. This amounts to approximately 50 per cent of the total group with court records. This led to the question of whether or not those pupils with both court records and special education elementary school experience had had their initial contact with the Juvenile Court before or after their experience with special education. By examining the data from Table XXX and Table XXIX it is possible to see that 42 of the 54 children so involved had had their initial contact with the court previous to their special education experience. This number amounts to almost 78 per cent of the total number of pupils who had both experience in Juvenile Court and experience in special education.

In summary, it can be seen that there is an apparent relationship between experience in Juvenile Court and early withdrawal from school, that most of the appearances in Juvenile Court (79 per cent +) were charges, that there is a relationship between chronological age at the beginning of Juvenile Court record and early withdrawal, and that a relatively high proportion of the children with Juvenile Court records had also been in special education in the elementary school. However, most of the children who had records in Juvenile Court, and also experience in special education, had made their initial contact with the Juvenile Court prior to their special education experience. Thus it must not be concluded that children who are in special education are also more likely to be in Juvenile Court. It is more likely that the children selected for special education placement in the elementary school were those children who were more aggressive, and thus more likely to become involved with the Juvenile Court.

SPECIAL INTERESTS

One of the elements that it was felt would be indicative of community operation was pupil activity outside the school setting. The approach used here was to ask the pupils, during the interview, to name special interests and hobbies. No effort was made to direct their choices in any way.

Data obtained in response to these questions were tabulated according to group and sex. Analysis of the tabulations failed to reveal any apparent relationship between the number of hobbies or interests reported and continuance in school. For the boys, the activities mentioned most frequently were sports, including baseball, basketball, golf, and tennis, hunting and fishing, cars, swimming, music, and watching TV. For the girls the activities mentioned most frequently were movies and TV, and sewing. Although many other hobbies and special interests were mentioned, the frequency of mention was quite small, being usually once or twice.

The fact that a child could have an interest in a subject that would not be shared by other boys and girls, would in no way invalidate the effect of that interest as a stabilizing factor. An effort was made to take this condition into account by calculating the mean number of activities per pupil according to group and sex. However, this proved to be unrewarding so far as uncovering a factor associated with school continuance is concerned, since no substantial differences were found among the different groups.

It has been noted earlier that some apparent relationship exists between failure to participate in extra-curricular activities and continuance in school. In this connection, the number of pupils that reported no hobby or special interest was tabulated by group and sex. The outcome indicated that some eighty per cent of the pupils reported a special interest or hobby, with no apparent relationship between the "no interest or hobby" groups and continuance in school, nor was any differentiation apparent according to sex.

On the basis of the information accumulated here, there was no identifiable relationship found between special interest or hobbies and continuance in school.

FACTORS INVOLVING PARENTS

EDUCATIONAL LEVEL OF PARENTS

Whenever people concerned with the pupil drop-out rate assemble to discuss the question, one of the thoughts often voiced is that if parents would only show more interest and encourage their children to continue in school, that the children would continue their education farther, and that influences outside the school would have less effect upon the pupil in influencing him to quit school early.

An assumption made here was that those parents who had themselves continued in school longest would be those most likely to urge their children to stay in school. Information concerning the highest grade in school completed by the parents of the pupils in the sample was obtained and tabulated according to group. The results of this tabulation are reported in Table XXXI. Separate tabulations were made for fathers and mothers.

Examination of Table XXXI shows that for the total sample, the mean was 8.0 for the fathers and 8.4 for the mothers. United States Department of Census figures for the year 1950 show that for the standard metropolitan area of Kansas City, the average number of school years completed by persons 25 years and over was 11.2. When this figure of 11.2 is compared with the figure of 8.2 for this sample, it appears that the parents of the pupils included in this sample were substantially below the general educational level of the community.

Further examination of Table XXXI does indicate that there might be some relationship between highest grade completed by parents and continuance

TABLE XXXI

HIGHEST GRADE IN SCHOOL COMPLETED BY PARENTS

Group	Parent	GRADE COMPLETED								Average Grade
		0	1 - 4	5 - 7	8	9 - 11	12	Some College	Graduate College	
Group 8	Father		7	5	7	3	1	1	2	7.7
	Mother		3	9	6	7	4		1	8.3
Group 9	Father	2	7	16	18	10	2		1*	7.3
	Mother	2	6	18	14	15	8	1		7.8
Group 10	Father	3	3	10	9	10	8		1	8.2
	Mother	1	3	12	13	12	8			8.3
Group 11	Father	1	4	4	10	6	6			8.1
	Mother	1	1	7	6	13	8			8.9
Group 12	Father			3	3		1			7.7
	Mother			3	2	3	1			8.6
Graduates	Father		4	9	8	10	10		1	8.7
	Mother		4	8	10	13	12	1		9.0
Total	Father	6	25	47	55	39	28	1	5	8.0
	Mother	4	17	57	51	63	41	2	1	8.4
TOTAL SAMPLE		10	42	104	106	102	69	3	6	8.2

*Master of Arts

in school as indicated by grade of withdrawal. In order to test the extent of this relationship, the coefficient of mean square contingency was calculated. The contingency coefficient thus obtained was equal to C = .31 for the fathers and C = .25 for the mothers. These figures indicate that some degree of positive relationship did exist between the level of education achieved by parents and continuance in school by the pupils included in this study.

PARENT SUGGESTIONS FOR IMPROVEMENT

The beliefs that parents hold concerning the operation of their schools provides the undergirding for their opinions. In an effort to get at this element of beliefs, parents were asked to give suggestions for the improvement of the schools. This was done with the hope that the suggestions given by parents would provide a basis for inferring the parents attitude toward the school.

The analysis of parent suggestions for improvement indicates that the majority of the parents felt that some alteration of the curriculum was in order. These suggestions usually took the form of providing more special services for pupils and of providing courses that would be of more practical benefit to their children.

Another area in which parents had general agreement was that they felt that more strict discipline was needed. Presumably this means more stringent rules governing conduct on the school premises and more rigid enforcement of those rules.

The third area which received some attention by parents had to do with providing more individual attention for pupils while they are in school. Presumably this means that the parents felt that in some instances the personnel of the school had been unable to effect a sympathetic understanding of their child. Other suggestions mentioned less frequently touched upon many areas. Among these were suggestions concerning teachers. Some parents thought the teachers ought to be younger; some thought teachers ought to be older; some thought teachers were not as fair as they might be; others thought some teachers were lazy or lacked interest in their work. There was an indication that some parents felt that the age requirement for school attendance should be extended to a higher age level. Still others felt that there needed to be more financial aid from the schools. Some parents though that there should be more emphasis in teaching the three R's, and that there should be more aid with health problems. One thought that there ought to be more homework, and one thought that there ought to be less interference by parents in the functioning of the school.

While the suggestions for improvement given above represent real suggestions made by parents, the overwhelming majority of the parents had few or no suggestions to offer. In general they indicated an acceptance of the school and the manner in which it functioned, and in some cases expressed enthusiasm about the service that had been given their children while in the school setting.

In summary, most parents were complimentary to the school and the efforts of the school to provide services for their children. Some suggestions for improvement were given, but the number of parents giving such suggestions represents a relatively small proportion of the total group of parents interviewed. Investigation of the relationship between grade in school completed by parents and continuance in school as indicated by grade of withdrawal, indicates a positive correlation in that the higher the grade completed by parents, the farther the children went in school. This may reflect the value placed by parents upon continued schooling.

FACTORS INVOLVING SIBLINGS

SIBLING MEASURED INTELLIGENCE

Investigation of the relationship between school continuance and measured intelligence has been reported in an earlier section of this report. It had been the hypothesis that pupils who scored near the upper end of the range of measured intelligence included in the sample would be more likely to continue in school than those who did not so score. However, the comparison of mean intelligence test scores among the different sub-groups failed to reveal any significant relationship.

This led to the formulation of another question which centered around the intelligence of other children in the family. Specifically, the question was whether a demonstrable relationship existed between continuance in school and level of sibling intelligence. If such a relationship did actually exist, it should reveal itself through a comparison of the mean IQ's for the sub-groups of the sample with the mean sibling IQ for the corresponding group. This criterion would be satisfied if the difference between the sample sub-groups and the sibling sub-groups tended to decrease as the grade of withdrawal went down. If, on the other hand, there was no demonstrable relationship between continuance in school and level of sibling intelligence, there would be no identifiable trend among the mean scores for the sample groups and their corresponding sibling groups.

One of the questions on the personal interview form called for the names and birth dates of other children in the family. With this information it was possible to work with the office of Psychological Services to discover if the other children in the family had been examined and if so, what their scores had been. The individual testing program in Kansas City has been described earlier in this report. Armed with the names of the siblings and their birth dates, it was possible to locate the records of any brothers and sisters of the pupils included in the sample, who had attended the Kansas City schools, and who had been examined while in attendance there.

After the information concerning measured intelligence test scores for the siblings was obtained, a tabulation was made and mean scores calculated for the siblings by group. The results of this tabulation are reported in Table XXXII.

TABLE XXXII

COMPARISON OF MEASURED INTELLIGENCE FOR STUDY PUPILS AND THEIR SIBLINGS

Group		Group Mean IQ	Mean Sibling IQ	Diff. (Sib.-Study)	No. of Siblings*
Grads	T	73.8	90.0	+16.2	121
	M	73.2	90.1		41
	F	74.2	89.9		80
Group 12	T	71.5	86.0	+14.5	21
	M	74.6	83.0		15
	F	64.5	93.4		6
Group 11	T	72.2	88.7	+16.5	100
	M	71.4	89.8		39
	F	73.0	88.0		61
Group 10	T	72.9	90.2	+17.2	127
	M	73.4	89.8		91
	F	72.0	95.2		36
Group 9	T	72.0	87.0	+15.0	184
	M	71.9	86.8		131
	F	72.2	90.6		53
Group 8	T	70.7	83.1	+12.4	94
	M	70.7	83.8		77
	F	70.8	76.1		17

*Represents the number of siblings for which IQ scores were available.

Table XXXII shows the mean IQ for each of the groups of the sample, the mean IQ obtained for the corresponding sibling groups, the difference between the study group mean IQ and the sibling mean IQ, and the number of siblings upon which the IQ means were based. Comparison of the mean IQ's for the study groups with the corresponding sibling group mean IQ shows that in each case the sibling group mean IQ was higher than the study group mean IQ. The average difference between the study group mean IQ and the sibling group mean IQ was found to be 15.3 IQ points. When the obtained difference for each of the sub-groups was compared with the average difference for all of the groups taken collectively, the range of differences was found to be from .3 IQ point to 2.9 IQ points. It may be noted that the difference of greatest magnitude was found in the comparison between group 8 and its corresponding sibling group. The range of deviations from the average difference for the other groups was substantially more restricted when the group 8 data were removed from consideration. These data indicate that while the sibling groups did score substantially higher than the study groups in measured intelligence that this was true for all of the groups and not restricted to the graduates or any other single group with the possible exception of the grade 8 group. Even here, while the difference is of greater magnitude than among the other groups, it is not sufficiently great to serve as a predictive criterion.

On the basis of the assumptions described earlier there would appear to be no significant relationship between level of sibling intelligence and continuance in school.

Before leaving the question of sibling intelligence, attention should be directed to the level of measured intelligence obtained for the sibling sub-groups. From Table XXXII it can be seen that the highest mean sibling

IQ obtained was 90.2 and the lowest was 83.1. These means indicate that although the sibling mean IQ scores were substantially higher than the mean IQ scores obtained for the study groups, the mean values for the siblings still fell in the low-average to dull-normal range of measured intelligence. While there was some differentiation in measured intelligence according to the sex of the siblings, the direction of differences is equally divided between boys and girls, thus indicating no apparent relationship between measured intelligence by sex of sibling and continuance in school.

SIBLING EDUCATION

Another area of investigation concerning siblings involved an examination of school experience. The question under study here was whether or not a relationship might exist between continuance in school for the study groups and amount of formal education achieved by the corresponding sibling groups.

Information concerning the school experiences of the siblings was accumulated and analyzed according to the number of siblings that were no longer in school. This group of siblings was tabulated as graduates or withdrawals. The early withdrawals were then retabulated according to the grade of withdrawal from school. The results of this tabulation are reported in Table XXXIII.

Table XXXIII shows that almost two-thirds of the siblings of the Graduate group stayed in school until graduation. This was a higher proportion than any of the other siblings groups except those for grade 12 group. The proportion of siblings graduates for the grade 12 group must be viewed with strong reservations because of the small number of siblings for which data were available. For the other study groups, the proportion of siblings who graduated drops sharply from the proportion of

TABLE XXXIII

HIGHEST GRADE COMPLETED BY SIBLINGS

	STUDY GROUPS					
	Grad.	Group 12	Group 11	Group 10	Group 9	Group 8
Special				2	2	5
Grade 5	1			1		
Grade 6					1	2
Grade 7				2	6	5
Grade 8	3	1	8	11	18	10
Grade 9	3	1	7	8	12	8
Grade 10	2		6	6	13	6
Grade 11	2		5	7	8	6
Grade 12				1	1	
Total Withdrawals	11	2	26	38	61	42
Graduates	19	5	7	18	14	6
College	1*	1*		4*		
Per Cent Graduated	63.33	71.43	21.21	32.14	18.67	12.50

*Included in Graduate number

graduates among the siblings of the graduate study group. These figures tend to indicate a definite relationship between sibling education and continuance in school.

The extent of this relationship was studied by the application of the contingency coefficient. When the calculations were completed the magnitude of the correlation was C = .35. This value is sufficiently high to support an hypothesis of positive relationship between sibling education and continuance in school.

EMPLOYMENT AFTER LEAVING SCHOOL

One of the factors that would have possible curricular significance is the type of job that these pupils found after leaving the school setting. In order to collect data in this regard, pupils were asked during the interview to indicate whether or not they were employed, and, if so, the kind of job that they held. They were also asked to indicate previous jobs that they had held. At the time these interviews were made the employment conditions in the community were normal. It was not a time when jobs were extremely scarce, nor were they extremely plentiful.

One of the questions raised may be the employability of all of the pupils included in this sample. No effort was made to define the degree of employability by individuals in the sample, except as might be inferred from the recorded intelligence test score.

In conducting this inquiry into employment the primary questions to be answered involved the type of employment most frequently found, whether there was any differentiation between graduates and early withdrawals, and the incidence of the unemployed among the total sample.

The occupations reported in the interviews were tabulated according to groups, and then classified according to the first digit classification in the Dictionary of Occupational Titles[5]. The occupational classifications for the early withdrawal groups were combined and compared with the occupational classifications for the graduate group. The resulting values are shown in Table XXXIV, which also includes information concerning the number unemployed and the number of girls who were listed as housewives. Housewives were tabulated separately, and are not included in any other groups. The comparison of graduates and withdrawals are also shown pictorially in

Figure 4.

TABLE XXXIV

CLASSIFICATION OF REPORTED OCCUPATIONS

Occupational Classification	Graduates		Withdrawals		Total			
	N	%	N	%	B	G	T	%
Professional/ Managerial	1	2	1	.5	2	0	2	1
Clerical/ Sales	6	12	22	11	11	17	28	12
Service	7	14 }28	37	19 }26	20	24	44	18 }27
Armed Forces	7	14	14	7	20	1	21	9
Agricultural	0		2	1	2	0	2	1
Skilled	1	2	1	.5	2	0	2	1
Semi-skilled	2	4	18	9	17	3	20	8
Unskilled	7	14	39	20	40	6	46	19
Unemployed	15	31	40	21	31	24	55	23
Housewife	3	11*	20	29*		23	23	24*

*Per cent of girls in group

Examination of Table XXXIV and Figure 4 indicates that the occupational classification with the greatest frequency was the service area, followed by unskilled and clerical/sales in that order. In both Table XXXIV and Figure 4, the number of former pupils in the Armed Services are shown separately, since they contributed a substantial amount to the total service frequency. When the number in the Armed Services is deducted from the total service classification frequency, the percentage for service is reduced to approximately the same as the percentage for unskilled occupations.

The second major question was whether there appeared to be any appre-

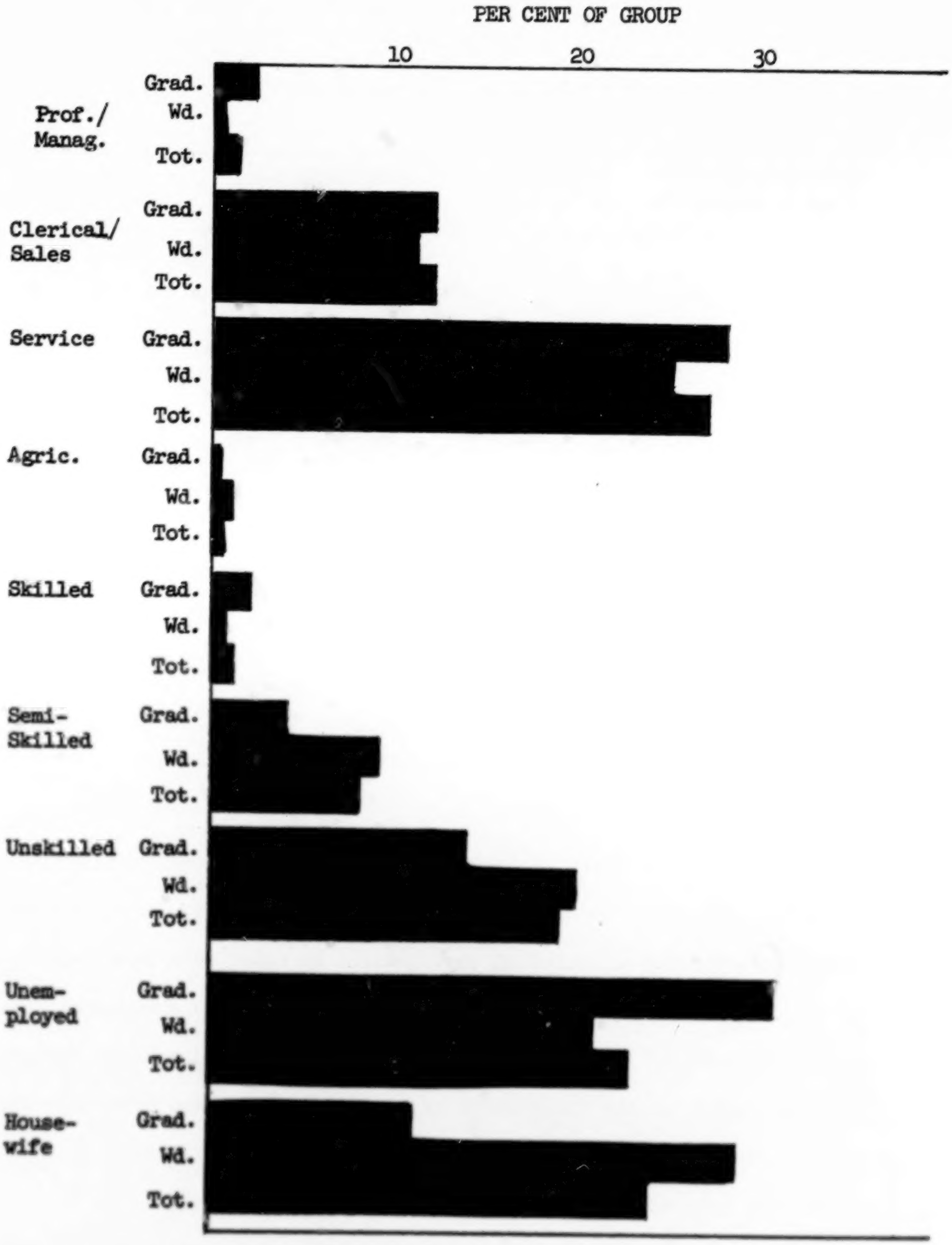

Fig. 4. Occupations Reported In Interviews By Graduates and Withdrawals

ciable differentiation between the types of jobs found by graduates and early withdrawals. Figure 4 indicates that there were slightly more graduates in the clerical/sales classification and slightly more graduates in the service classification, with fewer graduates in the semi-skilled and unskilled classifications. This should be tempered however, with the knowledge that the proportion of graduates unemployed was greater than for any of the other groups. It might well be that if a greater proportion of the graduates had been employed the differences noted for the unskilled and semi-skilled classifications would have been reduced between the graduates and the early withdrawal groups. However, this can not be demonstrated from the available information.

The unemployed group was considered separately and examined more thoroughly than any of the other employment groups. One of the questions raised was whether or not those pupils who were unemployed were pupils who differed markedly from the total sample with respect to measured intelligence. Accordingly, the intelligence test scores for the pupils in the unemployed group were tabulated and are recorded in Table XXXV. The mean IQ's reported in Table XXXV for the total unemployed group differ less than one IQ point from the mean IQ reported for the total sample. Apparently those in the unemployed group did not differ significantly from the total sample with respect to measured intelligence.

Another point investigated was whether or not the pupils presently listed as unemployed had previously been employed. If such proved to be the case, it might be inferred that the previous work experience had been unsuccessful. Of the 55 individuals included in the unemployed group, 26 had been previously employed. This would tend to support the point of view that, for approximately one-half of the group, the work world was a difficult place in which to make a successful adjustment. At this point it

TABLE XXXV

MEASURED INTELLIGENCE OF UNEMPLOYED GROUP

Group	Boys	Girls	Total
Graduate	74.83	72.67	73.53
Group 12	-- *	64.50	64.50
Group 11	67.50	74.33	70.43
Group 10	77.57	72.50	75.73
Group 9	72.33	75.33	73.83
Group 8	69.63	-- *	69.63
Total Sample	72.68	72.83	72.75

*None of those interviewed were unemployed

should be noted that no attempt was made to discover which of these pupils were actively seeking employment, and which may have been living in a sheltered environment where they had no urgent need to find employment.

PART TWO

PROSPECTIVE ASPECT

The prospective aspect of this study was designed to serve two purposes. The first purpose was to inquire into the affect of a recent change in the Missouri Compulsory Attendance Law, which set the minimum age for voluntary withdrawal at 16 years. The second purpose was to accumulate data comparable to that obtained for the retrospective aspect as the basis for comparison of the two samples of pupils. In addition, it would be possible to obtain other kinds of information from a sample of pupils currently enrolled in school.

SELECTION OF SAMPLE

The criteria for inclusion in the prospective sample were that a pupil must be currently enrolled in the 10th grade in school and must have a measured IQ of 80 or below on an individual intelligence test. A survey of all of the city high schools was done in order to determine the number of pupils that would be eligible under the criteria described above. The composition of the sample thus identified, in terms of the emergent groups, is reported in Table XXXVI.

TABLE XXXVI

COMPOSITION OF PROSPECTIVE SAMPLE BY NUMBER AND SEX

Group	N	$\%N_T$	N_B	N_G
Graduates	46	29.11	18	28
Withdrawals	98	62.03	44	54
Grade 12	19	12.03	9	10
Grade 11	40	25.32	19	21
Grade 10	39	24.68	16	23
Continuing	14	8.86	10	4
Total	158	100.00	72	86

ORGANIZATION FOR STUDY

The organization for study of the prospective sample was essentially the same as that for the retrospective sample. The same sources of data were utilized, and pupils were classified into sub-groups according to the year of withdrawal. In the case of the prospective sample one additional sub-group was identified. It was composed of those children who had failed to graduate and were continuing in school the following year. Composed of 14 pupils, it is identified in Table XXXVI and in subsequent tables as the "Continuing Group".

EFFECT OF CHANGE IN COMPULSORY ATTENDANCE LAW

At the time this question was proposed, information concerning the chronological age of early withdrawals was not collected on a systematic basis. The legal qualifications for early voluntary withdrawal were that a child must be 14 years of age and have completed the eighth grade. It was presumed that the children who composed this sample were of the type most likely to withdraw as soon as possible, so if the change in the compulsory attendance law would result in keeping pupils in school longer, then the chronological age at time of withdrawal should be increased after the new law went into effect.

As part of the data accumulation for this study, information concerning chronological age at time of withdrawal was obtained for pupils in both the prospective and retrospective samples. If the change in the compulsory attendance law had actually resulted in keeping pupils in school longer, then the mean chronological age of withdrawal for pupils in the prospective sample should be higher than the mean chronological age of withdrawal for pupils in the retrospective sample, since the new law was in effect for the pupils in the prospective sample. Information concerning chronological age for the prospective sample is reported in Table XXXVII. Comparable information for pupils in the retrospective sample is reported in Table III.

Comparison of the figures reported in Table III and Table XXXVII shows that the mean chronological age at time of withdrawal for the grade 10 group in the prospective sample was 16.33. In the retrospective sample, the mean chronological age for grade 10 withdrawals was 16.73. This comparison shows that not only was the grade 10 withdrawal group of the prospective sample no older than the grade 10 withdrawal group of the retrospective sample, but that the pupils in the retrospective sample were slightly older.

TABLE XXXVII

CHRONOLOGICAL AGE AT WITHDRAWAL FOR PROSPECTIVE SAMPLE BY GROUP AND SEX

	Total $\bar{x}$ C A	N	Male $\bar{x}$ C A	N	Female $\bar{x}$ C A	N	Range
Graduates	18.67	46	18.94	18	18.39	28	20 - 17
Group 12	18.27	19	18.44	9	18.10	10	21 - 17
Group 11	17.17	40	17.47	19	16.86	21	20 - 15
Group 10	16.33	39	16.44	16	16.22	23	20 - 15
Continuing	18.55	14	18.60	10	18.50	4	20 - 18

Since grade 10 of the prospective sample was the first withdrawal group for which comparable figures were available it seemed advisable to review the mean chronological age at time of withdrawal for the grade 8 and grade 9 groups of the retrospective sample. For the grade 9 group of the retrospective sample, the mean chronological age at time of withdrawal was found to be 16.27 and for the grade 8 group it was 16.0. Recognizing that these are mean values, it is immediately apparent that some of the pupils in the withdrawal groups were less than 16 years of age at the time of withdrawal. Since there are no comparable figures available for the prospective sample it cannot be assumed that the pupils who withdrew before reaching grade 10 would be similar to the pupils of the retrospective sample at that level. However, there is basis for a strong presumption, as indicated later, that such an assumption would be well founded.

In view of the information reported here there is no indication that the change in the compulsory attendance law had affected the age of withdrawal for these pupils.

PROCEDURE FOR COMPARING THE PROSPECTIVE AND RETROSPECTIVE SAMPLE

It has been mentioned earlier that the bases for accumulating data for the prospective sample were essentially the same as for the retrospective sample. Therefore, in reporting the comparison of the two samples, comparable information for the prospective sample will be reported and interpreted in terms of similar information for the retrospective sample. In instances where the type of information available for the prospective sample was not available for the retrospective sample, the prospective sample will be discussed separately at a later point in this report.

INCIDENCE OF GRADUATES AND WITHDRAWALS

Information concerning the proportions of the prospective sample classified as graduates, withdrawals, and continuing are reported in Figure 5.

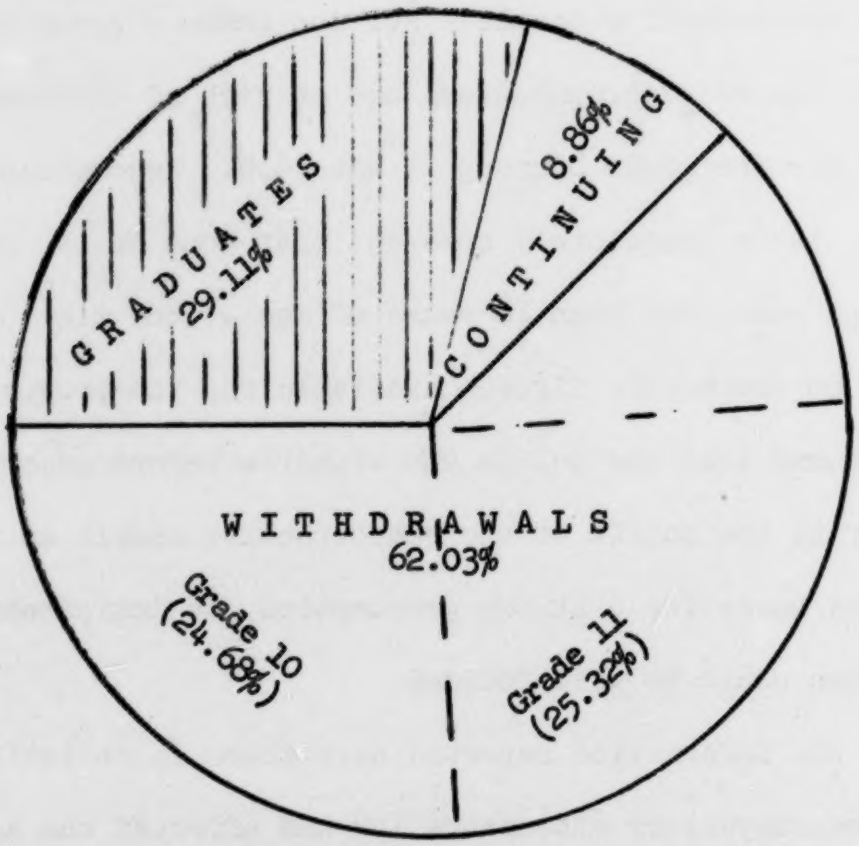

Fig. 5. INCIDENCE OF GRADUATES AND WITHDRAWALS FOR PROSPECTIVE GROUP

For comparative purposes the retrospective sample was adjusted to a base of 184 pupils. This base of 184 pupils represents the portion of the retrospective aspect sample remaining after the number of withdrawals up to grade 10 had been deducted.

From Figure 5 it can be seen that approximately 29 per cent of the prospective sample graduated. The comparable percentage for the retrospective sample, calculated from the adjusted base, was found to be approximately 32 per cent. Thus there is the indication that no substantial difference was found between the prospective and retrospective sample with respect to the proportion of pupils graduating. It seems a reasonable assumption that had the prospective sample been selected at an earlier grade level that the number in the prospective sample would have been approximately the same as the number in the retrospective sample. On the basis of this assumption, it is likely that had the incidence of withdrawal been calculated for the lower grade levels the same pattern of rate of withdrawal would have been obtained; namely, that the highest incidence of withdrawal would have been found at grade 9, with succeeding reduction in rate as higher grade levels are reached, although it may be noted that for the prospective sample the incidence of withdrawal for grades 10 and Il are approximately the same.

FACTORS INVOLVING PERSONAL CHARACTERISTICS

MEASURED INTELLIGENCE

Individual intelligence test scores for the pupils in the prospective sample were obtained and tabulated according to group. The results of this tabulation are reported in Table XXXVIII.

As indicated in Table XXXVIII, the mean intelligence test score for the total prospective sample was found to be 71.28. This figure is quite comparable to the value of 72.20 obtained for the retrospective sample. Compar-

TABLE XXXVIII

MEASURED INTELLIGENCE OF PROSPECTIVE SAMPLE BY GROUP

Group	$\bar{X}$ I. Q.	Median I. Q.	N
TOTAL	71.28	73.00	158
Graduates	72.87	74.00	46
Group 12	70.89	72.00	19
Group 11	70.35	71.00	40
Group 10	70.66	73.00	39
Continuing	71.00	72.00	14

ison of the range of mean intelligence test scores for the prospective sample with the range for the retrospective sample shows that the difference between the two was approximately one-half IQ point. Examination of the mean intelligence test scores for the different sub-groups of the sample indicates no substantial relationship between continuance in school and measured intelligence. This finding is in harmony with that obtained for the retrospective sample, as reported in Table II.

SEX

The relative effectiveness of boys as compared with girls with respect to continuance in school was examined for the prospective sample. The incidence of graduates and withdrawals for prospective sample, by sex, is reported in Figure 6.

The sex distribution within the prospective sample shows that approximately 54 per cent of the total sample were girls, with approximately 46 per cent boys. This is different from the retrospective sex distribution where

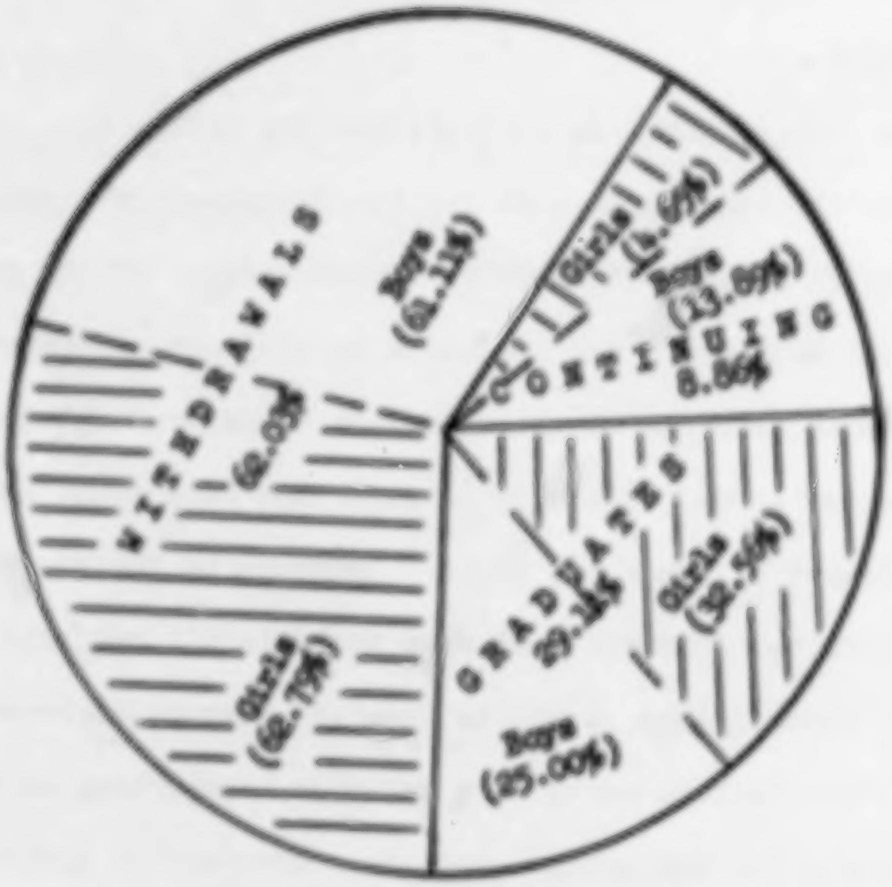

Fig. 6. INCIDENCE OF GRADUATES AND WITHDRAWALS FOR PROSPECTIVE GROUP, BY SEX

the number of boys exceeded the number of girls. For the retrospective sample, calculated from the adjusted base, the proportion of boys was 52 per cent and for girls approximately 48 per cent.

The portion of Figure 6 showing the graduate segment reveals that the girls contributed to the graduate group in greater proportion than the boys. The actual percentages show that girls contributed approximately 61 per cent of the total graduating group and approximately 39 per cent of the total graduating group were boys. Application of a test of statistical significance (T = 3.06) indicates that the proportion of boys in the graduate group was significantly less than would have been expected on the basis of the proportion of boys in the total sample when corrected for the continuing group. This finding tends to support that of the retrospective aspect, where continuance in school was found to be significantly related to sex.

FACTORS IN THE SCHOOL SETTING

MARKS IN SUBJECTS

The tabulation of marks in subjects for the prospective sample was accomplished in the same fashion as for the retrospective sample. Mean marks in subject were calculated for each of the sub-groups of the prospective sample for total mean marks and for marks in subjects described as academic. In addition, those subjects in which average marks were obtained were tabulated by grade and group. Subjects in which the mean marks indicated failure were also tabulated by grade and group. Information for the prospective sample concerning the comparison of mean marks in all subjects for the graduates with the other groups, subjects in which average marks were achieved, subjects for which failing marks were recorded, comparison of total marks and academic marks for all groups, and the comparison of graduate mean marks in academic subjects with other group mean marks in academic subjects, are reported in Tables XXXIX through XLIII on the following pages.

In summarizing the information concerning marks in subjects for the prospective group, and comparing that information with comparable data for the retrospective sample, it can be seen that the total mean marks for all subjects for the prospective group are very comparable to the mean marks obtained for the retrospective group. The over all mean mark for the prospective sample in total subjects was 2.34. For the retrospective group the the comparable figure was 2.61. In both cases the obtained mean marks are equivalent to a letter grade of I, the minimum passing mark.

Consideration of the mean marks obtained for the groups within the sample showed that the highest mean mark was obtained for the graduating group. However, for the other sub-groups the differentiation is not as consistent as it was found to be for the retrospective group. This failure

TABLE XXXIX

COMPARISON OF GRADUATE MEAN MARKS FOR ALL SUBJECTS WITH OTHER GROUPS MEAN MARKS FOR ALL SUBJECTS: PROSPECTIVE SAMPLE

Comparison	Graduates	Other Group	Difference
Grad vs Group 12	2.86	2.46	.40*
Grad vs Group 11	2.86	2.51	.35*
Grad vs Group 10	2.86	2.37	.49*
Grad vs Continuing	2.86	2.52	.34*

*Statistically significant at .05 level of confidence

to differentiate among the sub-groups with respect to mean marks, however, is overshadowed by the striking similarity obtained for the two groups with respect to over all marks in subjects.

It has been noted earlier that the subjects in which the retrospective sample pupils obtained the highest marks were in Physical Education, Music, Art, and Industrial Arts. Comparable tabulations for the prospective group pupils indicate that they were successful in the same areas: Physical Education, Music, Art, and Industrial Arts. The poorest subjects for both groups were found to be in the area usually designated as solid subjects, and especially was this true for "Numbers" and "Language".

With respect to marks in academic subjects (see Table VIII), the mean marks obtained for the prospective group were very similar to those obtained for the retrospective group. For both groups of graduates the mean mark in academics was found to be identical at 2.64. The over all mean mark for both samples, including the sub-groups, was found to be 2.31; again, an identical figure.

TABLE XL

MEAN MARKS 3.0 AND ABOVE, BY SUBJECT, GRADE AND GROUP*

	Kgn	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Grad.	Wk.Hab.	NONE	Wk.Hab. Art P.E.	P.E.	P.E. Art	Mus. P.E. Art	P.E. I.A.	Mus. P.E. Art I.A.	Sci. Art P.E. Mus. L.A.	Spch. Mus. P.E. I.A.	P.E. I.A. Mus.	Mus. P.E.	Eng. Mus. I.A. Fam.Liv. P.E.
12	Mus. P.E.	Mus.	P.E.	P.E.	Mus. P.E. Art	NONE	Num.	Mus. I.A.	NONE	P.E.	NONE	Mus. P.E. I.A.	NONE
11	NONE	Mus.	P.E.	Mus. Num. Art	P.E. Art	P.E.	Mus. Art	P.E. I.A.	Art	Mus.	NONE	NONE	
10	NONE	P.E.	P.E.	NONE	NONE	P.E.	P.E. I.A.	NONE	NONE	NONE	NONE		
Continuing Group	P.E.	Mus. P.E.	Wk.Hab. Mus. P.E.	Mus. P.E.	P.E.	P.E.	NONE	NONE	C.L. Mus.	P.E.	NONE	Typ.	Mus.

*Prospective Sample

TABLE XLI

MEAN MARKS BELOW 2.0 BY SUBJECT, GRADE AND GROUP**

	Kgn	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Grad.	NONE	NONE	NONE	NONE	NONE	NONE	NONE	La.Cr.	NONE	NONE	NONE	NONE	NONE
12	NONE	NONE	Num. Read.	NONE	NONE	NONE	La.Me. So.St.	NONE	NONE	NONE	Sci.	Sci. Typ.	
11	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	Sci.	Math. Sci. So.St.	Eng. Sci. So.St. Mus.	
10	NONE	Wk.Hab.	NONE	NONE	NONE	So.St.	La.Cr. La.Me. Sci.	NONE	NONE	Math. Sci.	Eng. Math. Sci. So.St. I.A.		
Continuing Group	NONE	NONE	NONE	NONE	NONE	NONE	So.St. Sci.	NONE	NONE	Sci. Art	Math.	Math. Sci. So.St.	Sci. So.St. Typ.

*Only four pupils in school long enough to receive marks

**Prospective Sample

TABLE XLII

COMPARISON OF TOTAL MEAN MARKS FOR ALL SUBJECTS AND TOTAL MEAN MARKS FOR ACADEMICS, BY GROUPS: PROSPECTIVE SAMPLE

		ALL SUBJECTS			ACADEMIC SUBJECTS			
Group	N	Boys	Girls	Total	Boys	Girls	Total	Diff.
Graduates	46	2.60	3.02	2.86	2.38	2.82	2.64	.22
12	19	2.25	2.65	2.46	1.98	2.42	2.20	.26
11	40	2.55	2.49	2.51	2.27	2.25	2.26	.25
10	39	2.43	2.32	2.37	2.21	2.11	2.16	.21
Continuing	14	2.54	2.47	2.52	2.28	2.30	2.29	.23
TOTAL SAMPLE	158			2.54			2.31	

TABLE XLIII

COMPARISON OF GRADUATE MEAN MARKS IN ACADEMICS WITH OTHER GROUPS MEAN MARKS IN ACADEMICS: PROSPECTIVE SAMPLE

Comparison	Graduates	Other Group	Difference
Grad vs Group 12	2.64	2.20	.44*
Grad vs Group 11	2.64	2.26	.38*
Grad vs Group 10	2.64	2.10	.54*
Grad vs Continuing	2.64	2.29	.35*

*Statistically significa[illegible]t .05 level of confidence

In summary, it is apparent that for both groups the graduating segment had the higher mean marks, that a definite relationship existed between incidence of failing marks and continuance in school, that the subject areas in which best and poorest performance was demonstrated were the same for both groups, and that both groups found a higher rate of success in the non-academic areas.

PERSONAL RELATIONSHIPS

Earlier in this report an explanation was made of the manner in which pupils are rated by teachers on personal characteristics. Mean ratings on personal traits in elementary school were reported for each of the seven characteristics by group and sex, and also on the combined characteristics reported according to the grade level in which the ratings were made. Comparable information for the prospective sample pupils is reported in Tables XLIV and XLV. These ratings are made on a 5-point scale with 5 as high.

Comparison of the mean ratings obtained for the pupils in the retrospective and prospective samples indicate a marked similarity. For the graduate segment of both groups of pupils, the highest mean rating was obtained in "Attitude Toward School Regulations", while the lowest mean ratings were obtained in "Initiative". All other mean ratings for the graduating groups were in the average range. Inspection of the mean ratings obtained for other sub-groups in the sample show that, while most of the mean ratings are in the average range, the ratings for the other sub-groups tend to be lower than the ratings for the graduate group. The trait "Participation in Group Activity" should be noted, with special reference to the group of earliest withdrawal. The mean rating for the grade 10 group on this trait was below average. Examination of the data for the retrospective sample pupils show that it was also at this point in the withdrawal gradient that

TABLE XLIV

MEAN RATINGS ON PERSONAL TRAITS IN ELEMENTARY SCHOOL BY TRAIT, GROUP, AND SEX: PROSPECTIVE SAMPLE

Trait		Grad	12	11	10	Contin.
Participation in Group Activity	T	3.53	3.53	3.14	2.94	3.18
	B	3.35	3.30	3.35	3.07	3.16
	G	3.64	3.68	2.98	2.86	3.23
		- .29	- .38	.27	.21	- .07
Attitude Toward School Regulations	T	4.06	3.56	3.56	3.47	3.18
	B	3.89	3.12	3.40	3.55	3.60
	G	4.16	3.84	3.68	3.42	3.63
		- .27	- .66	- .28	.13	- .03
Appearance	T	3.76	3.76	3.51	3.44	4.07
	B	3.80	3.22	3.43	3.55	3.91
	G	3.74	4.10	3.53	3.36	4.43
		- .06	- .88	- .10	.19	- .52
Dependability	T	3.80	3.21	3.32	3.17	3.20
	B	3.62	2.94	3.49	3.30	3.21
	G	3.91	3.38	3.17	3.08	3.18
		- .29	- .44	.32	.22	.03
Emotional Stability	T	3.82	3.29	3.24	3.17	3.41
	B	3.59	2.88	3.35	3.53	3.40
	G	3.95	3.55	3.15	2.94	3.43
		- .36	- .67	.20	.59	- .03
Initiative	T	2.89	2.38	2.56	2.39	2.46
	B	2.45	1.96	2.81	2.33	2.54
	G	3.16	2.64	2.36	2.43	2.28
		- .71	- .68	.45	- .10	.26
Cooperation	T	3.78	3.50	3.42	3.16	3.28
	B	3.41	3.20	3.57	3.29	3.42
	G	4.00	3.69	3.31	3.07	3.00
		- .59	- .49	.26	.22	.42
Combined Traits	T	3.66	3.32	3.25	3.10	3.13
	B	3.45	2.95	3.34	3.23	3.32
	G	3.79	3.55	3.17	3.02	3.30
		- .34	- .60	.17	.21	.02

TABLE XLV

MEAN RATINGS ON COMBINED PERSONAL TRAITS BY GRADE, SEX AND GROUP: PROSPECTIVE SAMPLE

Grade Level		Grad	12	11	10	Contin.
Kindergarten	T	3.34	3.28	3.06	3.32	3.61
	B	3.18	3.35	3.40	3.50	3.40
	G	3.57	3.23	2.77	3.20	4.10
1	T	3.27	3.18	3.07	3.34	3.29
	B	3.05	2.85	3.28	3.43	3.29
	G	3.43	3.44	2.92	3.25	3.30
2	T	3.40	3.05	3.17	3.35	3.27
	B	3.36	2.43	3.23	3.61	3.46
	G	3.41	3.42	3.13	3.14	2.83
3	T	3.34	3.33	3.37	3.12	3.35
	B	3.13	3.05	3.49	3.44	3.51
	G	3.48	3.52	3.29	2.82	3.03
4	T	3.62	3.23	3.56	3.18	3.23
	B	3.36	2.88	3.59	3.49	3.31
	G	3.76	3.58	3.53	2.91	3.05
5	T	3.60	3.34	3.51	3.09	3.15
	B	3.44	3.02	3.31	3.24	3.11
	G	3.69	3.90	3.67	2.95	3.25
6	T	3.78	3.60	3.24	3.07	3.27
	B	3.85	3.33	3.32	3.22	3.32
	G	3.74	3.78	3.17	2.95	3.15
7	T	4.09	3.50	3.36	3.20	3.26
	B	3.96	3.15	3.36	3.48	3.21
	G	4.17	3.68	3.36	3.03	3.40
8	T	4.03	3.41	3.28	2.97	3.14
	B	3.99	3.27	3.29	2.83	3.07
	G	4.05	3.48	3.27	3.07	3.35
9	T	3.66	3.19	3.25	2.77	2.86
	B	3.38	2.96	3.08	2.50	2.81
	G	3.84	3.36	3.41	2.94	2.98
10	T	3.60	3.01	2.91	2.65	2.95
	B	3.46	2.78	2.78	2.57	2.83
	G	3.71	3.21	3.02	2.78	3.20
11	T	3.66	3.06	2.71		3.01
	B	3.41	2.93	2.74		2.96
	G	3.81	3.19	2.66		3.10
12	T	3.77	2.43			2.60
	B	3.51	2.43			2.67
	G	3.94				2.40

the mean ratings on "Participation in Group Activity" fell below the average range.

The data obtained for the prospective sample tend to confirm the findings of the retrospective sample in that continuance in school tends to be associated with such traits as "Attitude Toward School Regulations", "Appearance", "Initiative", and, for the early withdrawals, "Participation in Group Activity".

Mean ratings on combined personal traits, as reported in Table XLV, reflect a pattern of change associated with the extent of continuance in school by the sub-groups of the sample. For instance, the grade 10 group showed a combined rating of below average beginning at the 8th grade and continuing until year of withdrawal. This is true for each of the other sub-groups in the early withdrawal segment. For the graduating group there was no year at which the mean combined rating on personal traits was below average, and it may be noted that for the crucial years of the junior high school, grades 7 and 8, the mean ratings for the graduates were slightly above average.

In summary, there does appear to be a positive relationship between teacher ratings on personal characteristics and early withdrawal from school. This was found to be an operative factor for pupils in both the retrospective and prospective samples, and seems to be positively associated with the traits of "Attitude Toward School Regulations" and "Appearance", and negatively associated with the traits of "Participation in Group Activity" and "Initiative". Low ratings on combined personal traits tend to precede the year of withdrawal for the early withdrawal groups.

PROGRESSION IN GRADES

Information pertaining to the regular progression in grade of the pupils in the retrospective sample was reported in Table XIX. Comparable information for the prospective sample is reported in Table XLVI.

TABLE XLVI

GRADES REPEATED BY GRADE, GROUP AND SEX: PROSPECTIVE SAMPLE

	GROUP												
	10		11		12		Grad.		Cont.		Total		
GRADE	B	G	B	G	B	G	B	G	B	G	B	G	Total Years
Kgn.	1		1	1			2*	1			4	2	6
1	1	2	1	4		2	4	6			6	14	20
2		1				2	1				3	1	4
3	1					1	1	3	1	1	3	5	8
4													
5		1	1	1	1		1				3	2	5
6	1	2			1						2	2	4
7			-	2				1			0	3	3
8	1	1		1			1	1			2	3	5
9						2					0	2	2
Σ Years Repeated	5	7	3	9	2	7	10	12	1	1	23	24	57
No. Pupils	4	7	3	7	2	6	10	9	1	1	20	30	50
Average	1.09		1.20		1.13		1.16		1.00				1.14
Per Cent of Group	28.21		25.00		42.11		41.30		14.29				31.64

*Read as two boys in graduate group repeated kindergarten

Comparison of the data for the retrospective and prospective samples show substantial variance. For the prospective sample there appears to be no relationship between average number of years repeated and continuance in school. With respect to the per cent of group repeating a grade, it appears that the grade 12 and graduate groups had the highest incidence of pupil failure. This does not coincide with the information for the retrospective sample, where the per cent of group showed a definite increase as the year of withdrawal lowered. The grade in school showing the highest incidence of pupil failure was found to be grade 1 for both samples.

ELEMENTARY SCHOOL SPECIAL EDUCATION EXPERIENCE

A tabulation of the number of pupils that had participated in special education programs in the elementary school was made for each of the subgroups. This information is reported in Table XLVII. Comparable information for the retrospective sample is reported in Table XX.

TABLE XLVII

PUPILS IN SPECIAL EDUCATION PROGRAM BY GROUPS: PROSPECTIVE SAMPLE

	Male				Female				Total			
Group	Grp. N	No. Sp.	% Sp.	$\bar{x}$ Yrs. Spec.	Grp. N	No. Sp.	% Sp.	$\bar{x}$ Yrs. Spec.	Grp. N	No. Sp.	% Sp.	$\bar{x}$ Yrs. Spec.
Grads.	18	6	33	1.83	28	6	21	2.33	46	12	26	2.08
Group 12	9	2	22	2.00	10	1	10	2.00	19	3	16	2.00
Group 11	19	3	16	3.67	21	6	29	2.17	40	9	23	2.67
Group 10	16	3	19	4.33	23	4	17	1.50	39	7	18	2.71
Contin.	10	4	40	2.25	4	0			14	4	29	2.25
Totals	72	18	25	2.67	86	17	20	2.06	158	35	22	2.37

The data reported for the prospective sample, with reference to experience in special education programs in elementary schools, tends to be in conformity with the data reported for the retrospective sample with respect to the mean number of years spent in special education. At this point, however, the similarity between the two samples ends. Whereas in the retrospective sample the percentage of pupils with special education experience in the elementary school tends to increase as the grade of withdrawal lowers, in the prospective sample the percentage of pupils with special education experience tends to decrease as the year of withdrawal lowers. Integration of the two dimensions indicates that although the graduating group had had a high percentage of pupils in special education programs the length of stay was substantially less for the pupils in the graduating group than for the pupils in the other sub-groups, with the exception of group 12.

EXTRA-CURRICULAR ACTIVITIES

As part of the investigations made in connection with the retrospective sample, comparisons of the graduate with the early withdrawal groups were made with respect to participation in pupil-defined extra-curricular activities. These comparisons indicated that there was a positive relationship between participation in extra-curricular activities and continuance in school.

Comparable information was obtained for the pupils in the prospective sample, and are reported in Table XLVIII.

Examination of Table XLVIII shows that the material for the prospective sample pupils was essentially the same as that for the retrospective sample pupils in that there was clear indication that participation in extra-curricular activities was related to continuance in school. This is indicated by the decrease in mean number of activities per pupil for the graduate group as compared with the early withdrawal groups. It is further emphasized by the sharp increase in percentage of pupils reporting no extra-curricular activities.

TABLE XLVIII

NUMBER OF EXTRA-CURRICULAR ACTIVITIES REPORTED: PROSPECTIVE SAMPLE

	Grad.	12	11	10	Cont.	Total
Number of Activities	71	20	32	19	13	155
Number of Pupils	46	18	37	29	14	144
$\bar{X}$ per Pupil	1.54	1.11	.86	.66	.93	1.08
Per Cent None	28	44	57	69	57	56

FACTORS IN COMMUNITY OPERATION

The collection of information regarding the incidence of Juvenile Court appearances for the pupils in the prospective sample revealed that only a very small portion of the pupils had a record in the Juvenile Court. Court records were located for only eight pupils (5.06% of the total sample) and involved only 12 court appearances. Of these 12 court appearances, seven were charges and five were non-charge. This small number of court involvement was judged to be inadequate as bases for comparison with the retrospective sample pupils.

Information concerning the reason for appearance in Juvenile Court, the number of years in special education in the elementary school, grade at first appearance, and chronological age at first appearance in court are reported in Table XLIX.

TABLE XLIX

APPEARANCES IN JUVENILE COURT: PROSPECTIVE SAMPLE

Group	Reason for Appearance	Years In Spec. Ed.	Grade at First Appearance	Age at First App.
Graduates				
1 girl	Imp. Care & Neg.	6	Pre-school	3
Group 12				
1 girl	Imp. Care & Neg.	2	5	11
2 boys	Sex	0	4	10
	Break. & Enter.	0	11	16
Group 11				
3 boys	Larceny & Neglect	2	10	16
	Theft	0	11	17
	Sex	0	9	17
Group 10				
1 boy	Lar. & Carlessness or Mischief	0	7	13
Continuing	None			

FACTORS INVOLVING PARENTS

EDUCATIONAL LEVEL OF PARENTS

Information concerning the highest grade completed by parents of the pupils in the retrospective sample showed that a low positive relationship existed between level of parental education and pupil continuance in school. Comparable data were obtained for the parents of the pupils in the prospective sample for purposes of comparison with the retrospective sample. A tabulation of the highest grade completed by the parents of the prospective sample, listed by group and sex of parent, is reported in Table L.

The highest grade completed by the parents of pupils in the prospective sample was found to be quite similar to that obtained for the parents of pupils in the retrospective sample. For the total sample, the mean grade

TABLE L

HIGHEST GRADE IN SCHOOL COMPLETED BY PARENTS: PROSPECTIVE SAMPLE

		GRADE COMPLETED								
Group	Parent	0	1 - 4	5 - 7	8	9 - 11	12	Some College	Graduate College	$\bar{x}$ Grade
Group 10	Father	3	5	5	7	3	3		1	6.9
	Mother	1	2	6	9	12	2			8.3
Group 11	Father	4	6	13	3	5	2			6.0
	Mother	1	3	9	8	10	3			7.8
Group 12	Father	2		3	2	2	1			6.7
	Mother		2	2	1	4	2			8.2
Graduates	Father	2		10	5	5	8	6	2	9.4
	Mother	1	3	5	10	14	6	4	1+	9.1
Continuing	Father		1	2	2	3	2			8.4
	Mother			1	4	4		2		9.5
Total	Father	11	12	33	19	18	16	6	2	7.5
	Mother	3	10	23	32	44	13	6	1	8.3
TOTAL SAMPLE		14	22	56	51	62	29	12	3	7.9

completed showed less than one-half grade difference between the two samples. Again, the average grade completed by the parents of the pupils in the prospective sample was found to be substantially lower than the general educational level reported for the community. Contingency coefficients calculated as a measure of relationship between the reported educational level of parents and continuance of pupils in school was found to be C = .43 for fathers, and C = .28 for mothers.

These figures tend to support the earlier finding of some degree of positive relationship between the level of education achieved by parents and pupil continuance in school.

PARENT PARTICIPATION IN ORGANIZATIONS

Pupil participation in extra-curricular activities and in clubs and organizations, both school and community related, has often been interpreted as contributing to good pupil adjustment and the development of a feeling of belonging, which in turn leads to the enhancement of the pupils' feeling of success in the school environment and in society generally. For parents, one index of personal and community operation might be the membership held in clubs and organizations. Accordingly, information was gathered concerning parental membership in clubs and organizations, and was tabulated according to sex of parent and sub-group of sample.

The results of these tabulations indicated that the parents of the pupils in this sample did not participate extensively in clubs and organizations. Approximately 54 per cent of the fathers indicated no membership in clubs or organizations, while for mothers the percentage was approximately 73 per cent without membership in clubs or organizations. Since no constraints were placed on the choice of organizations, and some business and labor memberships were included, the 54 per cent of fathers with no organizational affiliation seems quite large. If this may be interpreted as indicating that the parents generally place little value on membership in clubs or organizations, then it may be argued that this is a contributory factor in the relatively low rate of membership by pupils in pupil organizations. It may be relevant to note that only six mothers indicated a membership in the Parent-Teacher Association. Four of these were for pupils in group 10, one in the graduate group, and one in the continuing group. None of the fathers indicated a membership in the P.T.A Also, there was no apparent relationship between parent membership in organizations and year of withdrawal.

PARENTAL HOBBIES AND RECREATION

As part of the inquiry into the nature of parental activities, information concerning hobbies and recreational activities was gathered. Data obtained in this connection were tabulated according to sex of parent and year of pupil withdrawal.

Analysis of the results of these tabulations indicates that parents generally had not addressed themselves to the pursuit of hobbies. Approximately 33 per cent of the fathers and 41 per cent of the mothers indicated no hobbies. No apparent relationship between number of hobbies reported and year of withdrawal from school was revealed.

OCCUPATION OF PARENTS

One of the other factors involving parents that it was thought might be associated with school continuance was the occupation of parents. Presumably if there was an operative factor here it would differentiate between the occupations of the parents of children in the graduate group and those in the withdrawal groups. Information concerning parental occupation was obtained in the interviews and questionnaires and was tabulated according to the sample sub-groups. The occupations of the parents thus obtained were classified according to the Dictionary of Occupational Titles[5], and the results are reported in Table LI.

TABLE LI

OCCUPATION OF PARENTS: PROSPECTIVE SAMPLE

Occupational Classification	Graduates T	Graduates Fa	Graduates Mo	Withdrawals T	Withdrawals Fa	Withdrawals Mo	Continuing T	Continuing Fa	Continuing Mo
Professional/ Managerial	5	4	1	4	4	0	1	1	0
Clerical/ Sales	6	3	3	12	3	9	2	0	2
Service	23	9	14	35	15	20	5	3	2
Agricultural	0	0	0	3	3	0	0	0	0
Skilled	3	3	0	5	5	0	1	1	0
Semi-skilled	7	7	0	10	8	2	0	0	0
Unskilled	15	13	2	33	26	7	6	4	2
Unemployed	7	0	7	4	0	4	2	0	2
Housewife	16	0	16	28	0	28	3	0	3
Unknown/deceased/disabled	4	3	1	18	15	3	2	2	0

Examination of Table LI shows that the relative rank of the different classifications for the sub-groups are essentially the same. For both the withdrawals and the graduates the number one ranking classification was the service area followed by unskilled occupations. The number three rank for the graduates was semi-skilled, and number three for the withdrawal groups was clerical/sales. The number four ranking for both groups reverses the number three ranking, that is, the semi-skilled classification ranked fourth for the withdrawal groups and the clerical/sales classification ranked fourth for the graduating groups. The sample for the parents of the continuing pupils indicated that the unskilled classification ranked higher than the service classification by one tally. In ranking these classifications of occupations, the last three, unemployed, housewife, and unknown/deceased/or disabled were omitted from consideration.

Since there were 158 pupils in the sample it is possible that information could have been obtained for 316 parents. However, because of the unavailability of information for some of the parents the number for which information was actually available was reduced to 261 which represents approximately 83 per cent of the possible. This is a substantial percentage, and it is unlikely that the ranking of occupational classifications would be materially altered if the sample size were increased.

FACTORS INVOLVING SIBLINGS

MEASURED INTELLIGENCE

As part of the data gathered for the retrospective sample, measured intelligence scores for the siblings of the pupils in the retrospective sample were obtained. This was done in an effort to explore the relationship that might exist between the measured intelligence of siblings and continuance in school as indicated by the mean IQ of the sub-groups of the retrospective sample. Comparable data were obtained for the pupils of the prospective sample, tabulated according to sub-group, and are reported in Table LII.

Comparison of the data obtained for the retrospective sample with similar data for the prospective sample indicates that the same type of relationship exists for the pupils in the prospective sample and the sibling groups as was obtained for the pupils in the retrospective sample

TABLE LII

COMPARISON OF MEASURED INTELLIGENCE FOR STUDY PUPILS AND THEIR SIBLINGS: PROSPECTIVE SAMPLE

Group	N	Group Mean IQ	Mean Sib-Ling IQ	Diff. (Sib.-Study)	No. of Siblings*
Graduates	46	72.9	88.6	+15.7	107
Male	18	71.9	85.6		46
Female	28	73.5	90.5		61
Grade 12	19	70.4	87.2	+16.8	37
Male	9	71.6	89.1		17
Female	10	69.3	85.4		20
Grade 11	40	72.0	86.2	+14.2	109
Male	19	71.7	89.5		61
Female	21	72.3	83.3		48
Grade 10	39	70.7	85.4	+14.7	80
Male	16	70.1	88.0		35
Female	23	71.1	83.6		45
Continuing	14	71.2	91.4	+20.2	28
Male	10	70.0	90.1		25
Female	4	74.3	94.8		3

*Represents the number of siblings on which IQ data is based

and their sibling groups. For the prospective sample, the mean difference between the study group and the sibling group IQ's was found to be 16.3 points. For the retrospective sample the mean difference was found to be 15.3. A difference of this magnitude, 1.0 IQ points, does not appear to be significant. Examination of the magnitude of the difference between the study group mean IQ and the respective sibling group mean IQ failed to show any apparent relationship between sibling group and study group measured intelligence and continuance in school. This is indicated by the fact that the difference between the graduate group mean IQ and the respective sibling group was less than two points removed from the differences obtained for the withdrawal groups.

In this connection it is interesting to note that for the continuing group the difference between the study group and the sibling group was substantially greater than for any of the other sample sub-groups. Although the mean IQ for the study group did not differ substantially from the mean IQ for the other sub-groups of the sample, the mean sibling IQ was higher than was obtained for the other sibling groups. This may be interpreted as evidence to substantiate an assumption of relationship between the measured intelligence of siblings and continuance in school of the study group pupils. However, because of the small number of pupils involved in the continuing group, and the evidence of the comparisons of the graduate group with the other sub-group samples, this relationship between the measured intelligence of the continuing group and the respective sibling group should be interpreted with caution and viewed as an indication only.

With the exception of the continuing group relationship between measured intelligence of study group and sibling group, the other comparisons substantiate the findings for the retrospective sample in that no apparent significant relationship exists between measured intelligence of siblings and continuance in school by the pupils in the study sample.

SIBLING EDUCATION

In view of the positive relationship found between level of formal education achieved by the siblings of the pupils in the retrospective sample and continuance in school, it was decided to gather similar information for the siblings of pupils in the prospective sample. This information was obtained and tabulated according to sub-group of the sample. The results of that tabulation are reported in Table LIII.

TABLE LIII

HIGHEST GRADE COMPLETED BY SIBLINGS: PROSPECTIVE SAMPLE

	STUDY GROUPS				
	Grad.	Group 12	Group 11	Group 10	Continuing
Special	1			1	
Grad.	25	6	14	3	5
Grade 12	1	1	3	2	2
Grade 11	6	1	10	7	2
Grade 10	12	6	13	10	4
Grade 9	6	4	9	13	1
Grade 8	3	2	3	9	1
Grade 7			5	2	
Grade 6	1	2	4	2	
Grade 5			1		
Grade 4		2	2		
Grade 3			1	1	
Total Withdrawals	30	18	51	47	10
Total Graduates	25	6	14	3	5
Per Cent Graduated	45.45	25.00	21.54	6.00	33.33

Examination of the evidence reported in Table LIII tends to substantiate the earlier finding for the retrospective sample. A sharp drop may be detected between the percentage of sibling graduates for the study group graduates and the percentage of sibling graduates for the grade 12 group. Percentage of sibling graduates failed to differentiate sharply between the grade 12 and grade 11 groups, but between the grade 11 and grade 10 group the drop in percentage of sibling graduates was quite pronounced.

The findings reported for the prospective sample with respect to sibling education tend to support the belief of a positive relationship between level of formal education achieved by siblings and continuance in school on the part of the pupils in the study sample.

EMPLOYMENT AFTER LEAVING SCHOOL

Information concerning the type of employment found by the pupils of the prospective sample after leaving the school setting was gathered and classified according to the Dictionary of Occupational Titles[5]. The results of these tabulations are reported in Table LIV.

It may be recalled that for the retrospective sample the classifications ranked in order of frequency showed that the greatest number of pupil graduates of the retrospective sample found jobs in the service field. This was found to be true also for the pupils of the prospective sample graduates. With respect to the early withdrawals, the service classification again claimed the largest number of pupil employees. This was true for both the prospective and retrospective samples. In general, the findings for the prospective sample tend to coincide in large measure with the findings for the retrospective sample.

Of the 158 pupils in the prospective sample, employment data was available for 117, or 81.25 per cent. Information was available for additional pupils in the prospective sample, but was of such nature that it was impossible to classify because it usually referred to intentions. While expressed intention might eventually lead to employment in the area indicated, there

TABLE LIV

CLASSIFICATION OF REPORTED OCCUPATIONS: PROSPECTIVE SAMPLE

Occupational Classification	Graduates N	Graduates %	Withdrawals N	Withdrawals %	Total B	Total G	Total T	Total %
Professional/ Managerial	0	0	0	0	0	0	0	0
Clerical/ Sales	2	5	6	8	2	6	8	7
Service	18	49	26	36	21	23	44	40
Armed Forces	1		2		3	0	3	
Agricultural	0	0	0	0	0	0	0	0
Skilled	0	0	1	1	1	0	1	1
Semi-skilled	2	5	2	3	3	1	4	3
Unskilled	3	8	18	23	14	7	21	18
Unemployed	13	33	13	17	7	19	26	22
Housewife	0	0	10	23*	0	10	10	23*

*Per cent of girls in group

is no assurance that such would be the case, so those pupils were omitted from tabulation. Of the 117 included in the prospective tabulations there were five for which the notation "Never employed" was entered. This was taken to mean that these pupils were not actively engaged in seeking employment. This may have served as a biasing factor in that the area of unemployed reported in Table LIV may have been unduly enhanced.

As was done for the pupils in the retrospective sample included in the unemployed classification, the measured intelligence test scores of the unemployed group for the prospective sample were obtained and analyzed according to the study group. This was done in order to investigate the possibility that the mean measured intelligence of the pupils in the unemployed group differed substantially from the mean measured intelligence of the pupils in the total study group. The outcomes of a similar investigation for the retrospective sample had indicated no substantial variation in measured intelligence between the pupils in the sample groups and the measured intelligence of the unemployed groups. Examination of Table LV shows that this was also true for the prospective group pupils.

TABLE LV

MEASURED INTELLIGENCE OF UNEMPLOYED GROUP: PROSPECTIVE SAMPLE

Group	Boys	Girls	Total
Graduate	69.80	74.50	76.54
Group 12	*	-	-
Group 11	76.50	65.40	68.57
Group 10	63.00**	74.83	73.14

*None of this group listed as unemployed
**Only one boy

FACTORS INVOLVING PERSONAL PROBLEMS

YOUTH INVENTORY

In order to study the number and type of personal problems identified by pupils, the pupils in the prospective sample were asked to mark the SRA Youth Inventory[6]. The Youth Inventory is a check list of problems which may be used to help identify the problems that young people say worry them most. Based upon the responses of more than 15,000 teen-agers throughout the country, who were asked to state in their own words what things bothered them most, the Inventory is divided into eight major sections, of which seven were used in this study. The seven used here are entitled: My School (33 items), After High School (37 items), About Myself (44 items), Getting

Along With Others (40 items), Home and Family (53 items), Boy Meets Girl (32 items), and Health (25 items). The responses of the pupils in this sample were tabulated according to the number of items marked in each category and the percentage of pupils marking each item. Those items marked in each category by 25 per cent or more of the pupils in the group were selected for consideration here.

NUMBER OF ITEMS MARKED

The number of items marked by 25 per cent or more of the pupils in each group on the SRA Youth Inventory are reported in Table LVI.

TABLE LVI

NUMBER OF ITEMS MARKED ON SRA YOUTH INVENTORY
BY TWENTY-FIVE PER CENT OR MORE OF THE PUPILS

	Grad		12		11		10		Contin.	
	No.	Rank	No.	Rank	No.	Rank	No.	Rank	No.	Rank
My School	8	3	13	2	12	1	18	1	12	2
After High School	11	1	14	1	11	3	8	5	10	3.5
About Myself	10	2	10	3	11	3	15	2	16	1
Getting Along With Others	7	5	8	4.5	11	3	10	3	9	5
Home and Family	7	5	4	6	9	5.5	8	5	4	7
Boy Meets Girl	7	5	2	7	9	5.5	8	5	10	3.5
Health	4	7	8	4.5	7	7	6	7	8	6
TOTAL	54		59		70		73		69	
No. in Group	46		19		40		39		14	
No. Marking Inventory	45		17		26		27		14	
Per Cent	98		89		65		69		100	

Examination of Table LVI shows that the graduates were most concerned with questions having to do with the category entitled After High School. Next in order of frequency of items selected were the categories About Myself and My School. The category in which the smallest number of items were marked was Health. After High School was also the category that ranked number one for the grade 12 group. Both the grade 11 and grade 10 groups marked My School category as the area of most frequent problems. The continuing group was most frequently concerned with problems associated with the category About Myself. The categories ranking seventh in the respective groups were Boy Meets Girl for the grade 12 group, Health for group 11 and group 10, and Home and Family for the continuing group.

With respect to the total number of items marked by 25 per cent or more of the groups, the graduate groups marked the fewest (approximately 74 per cent of the total number marked by the grade 10 group), with a steady increase in total number of items marked through the withdrawal groups.

The fact that the pupils in the graduate group marked fewer items than the pupils in the other groups is further illustrated by the information reported in Table LVII.

TABLE LVII

MEAN NUMBER OF ITEMS MARKED PER PUPIL, BY CATEGORY, ON SRA YOUTH INVENTORY

Category	Grad.	12	11	10	Contin.
My School	6.96	9.76	13.73	17.00	8.93
After High School	15.40	16.71	12.42	6.89	12.50
About Myself	8.78	13.53	15.62	17.11	12.07
Getting Along With Others	7.40	11.82	12.58	11.78	12.93
My Home and Family	6.89	11.29	9.85	12.48	8.93
Boy Meets Girl	5.38	6.53	6.81	7.56	8.43
Health	4.13	6.24	5.54	4.93	5.57
Mean For Total	54.93	75.88	76.54	77.74	69.36

It is apparent, upon examing Table LVII, that the pupils in the graduate group were more concerned about the anticipated experiences after high school than they were with the other categories of the Youth Inventory. This did not prove to be the case for the other groups involved. The graduate group appeared to be less concerned with problems associated with themselves, in getting along with others, and in home and family, than were the early withdrawal groups. The reader may note that, for groups 10 and 11, the pupils seemed to be more concerned with problems about school and about themselves than they were about what happens after high school. Presumably, this indicates that at the time the Inventory was marked the pupils in the groups 10 and 11 were not anticipating early withdrawal from school.

In any event, it is clearly evident from Table LVII that the pupils in the early withdrawal groups reported a substantially greater number of problems than the pupils in the graduating group.

PROBLEMS MARKED IN THE DIFFERENT CATEGORIES

The actual items marked by 25 or more per cent of each group are shown in Tables LVIII through LXIV on the following pages. The percent of pupils marking each item and the rank of that item in the group is reported for each category.

Analysis of the types of items marked by the pupils of the different groups points up the area about which they felt the strongest concern. Examination of these areas of focal concern indicates certain general problem areas that run throughout the responses.

One of the threads that runs throughout the whole series of categories is concerned with the apparent lack of confidence that these pupils felt in themselves. They recognize that they had not been able to function as effectively in the school setting as many of the other pupils. This is witnessed by expressed worries that they felt they were not as smart as other people, that they felt unsure of themselves, afraid to speak up, were inclined to worry about little things, and were afraid of making mistakes. At various points they expressed a need to feel more important in the group in which they operate. They were concerned about taking tests, reciting in class, taking notes, writing reports--all of the things that are so important in the school setting.

Another thread that is prominent in the analysis is that having to do with the concern about employment and what will happen to them after high school with respect to job placement. They wondered about the kinds of jobs for which they were best suited, they were concerned about how to make an application, and how to prepare for an interview. At numerous points the desire for work experience was expressed. They felt also that they would like to have more vocational courses, and to have the opportunity to learn a trade. At various points they expressed concern about the impracticality, in their opinion, of the courses that were offered in the high school, and wished that other courses could be offered, presumably such courses to be more vocational in nature. They wondered about the kinds of jobs that were open and the careers that were available to them. How to find help in finding a job was another area in which all groups expressed concern.

A third thread that recurs from point to point in this analysis is the feeling that the pupils in this study group had about their teachers. Often they expressed a feeling that the teachers with whom they had come in contact were often impersonal and uninterested in their problems. Some felt that teachers play favorites. Another complaint was that assignments were not made clearly. It is interesting to note that all of the complaints registered against the teachers were made by those of the early withdrawal groups.

At no point was criticism of the teacher a focal concern for the graduate group. However, it should be noted also that the graduate group was the only group where 25 per cent or more expressed the feeling that they hated school.

Another general thread that permeates all groups has to do with the concern of these pupils about marriage and family. How can they find a mate, what are the qualities that they should look for in selecting a mate, how long should they know one another before marriage, what are the kinds of things that cause trouble in marriage, and how can they prepare for the responsibilities of marriage and a family. These apparently were of great concern to these pupils. Associated with this thread was the expressed concern about problems related to sex. Most of the problems concerned with this subject were around the point of needing more information.

In the area of personal relations their expressed concerns were directed primarily to the object of making new friends. They wanted people to like them better, and they felt the need to be more important in their group, but apparently were unsure about how to accomplish this.

In relation to the Home and Family, all of the groups wished that their parents would treat them as more responsible persons. They felt that their parents were too strict about dating, and about being out at night. They also complained that there was bickering and quarreling in their home. Some expressed a feeling that they were a burden to their parents. Pupils in all of the groups felt that they could not discuss personal things with their parents. Some wished they had a room of their own.

In summary, it appears that these pupils characterized themselves as being inadequate in areas associated with school work, and in their relationships with other people. They also expressed concern about employment after finishing their time in school, about entering marriage, and about the lack of opportunity to discuss personal problems with some responsible adult.

Further refinement of the information obtained from the pupil responses on the SRA Youth Inventory was secured by tabulating separately the number and type of items that were marked by 75 per cent of the group. This was done with the thought that any items marked by 75 or more per cent of the group could be assumed as representing the points of greatest concern to the group. This tabulation showed that for the graduate group only two items were marked by 75 per cent or more. For the grade 12 group there were four items, for the grade 11 group there were six items, for the grade 10 group there were seven items, and for the continuing group there were five items. The items thus identified are as follows:

Graduate

1. I wish I knew how to study better.
2. I would like to get some practical work experience.

Group 12

1. How do I go about finding a job?
2. What jobs are open to high school graduates?
3. Where can I go for help in finding a job?
4. I would like to have more vocational courses.

Group 11

1. I wish I knew how to study better.
2. I feel I'm not as smart as other people.
3. I wish I could be more calm when I recite in class.
4. I want to make new friends.
5. I get stage fright when I speak before a group.
6. I need more individual help with my courses.

Group 10

1. I have difficulty expressing myself in words.
2. I wish I knew how to study better.
3. I get stage fright when I speak before a group.
4. I need more individual help with my courses.
5. I worry about tests.
6. I want people to like me better.
7. I have difficulty taking notes.

TABLE LVIII

ITEMS MARKED BY TWENTY FIVE PER CENT OR MORE OF THE GROUPS: MY SCHOOL

QUESTION	GRADS. %	GRADS. Rank	GRADE 12 %	GRADE 12 Rank	GRADE 11 %	GRADE 11 Rank	GRADE 10 %	GRADE 10 Rank	CONTIN. %	CONTIN. Rank
1. I wish I knew how to study better	89	1	71	1	81	2.5	93	1.5	36	7
2. I would like to get some practical work experience.	76	2	53	5.5	-	-	70	6	71	2
3. I wish I could be more calm when I recite in class.	64	3	47	8	85	1	74	5	29	9.5
4. I have difficulty expressing myself in words.	62	4	65	2.5	62	5	93	1.5	79	1
5. I have difficulty taking notes.	56	5	-	-	35	9	78	3.5	43	6
6. I wish I knew more about using the library.	44	7	-	-	-	-	-	-	29	9.5
7. I would like to take courses that are not offered in my school.	44	7	59	4	-	-	37	12.5	-	-
8. I hate school.	44	7	-	-	-	-	-	-	-	-
9. I feel sleepy in class even when I've had enough sleep at night.	-	-	-	-	42	7	-	-	50	4.5
10. I have difficulty keeping my mind on my studies.	-	-	53	5.5	65	4	67	8	57	3
11. I have difficulty expressing myself in writing.	-	-	65	2.5	35	9	67	8	29	9.5
12. My teachers don't make assignments clear.	-	-	29	12	-	-	30	16.5	-	-
13. I must select a vocation that doesn't require college.	-	-	47	8	-	-	-	-	50	4.5
14. My teachers aren't interested in the things that interest me.	-	-	47	8	54	6	30	16.5	29	9.5
15. I need more individual help with my courses.	-	-	35	10	81	2.5	78	3.5	-	-
16. My teachers are too impersonal.	-	-	29	12	-	-	-	-	-	-
17. My teachers play favorites.	-	-	20	12	-	-	37	12.5	29	9.5
18. I have difficulty keeping my mind on what goes on in class.	-	-	-	-	-	-	67	8	-	-
19. My teachers give me no encouragement.	-	-	-	-	35	9	-	-	-	-
20. I don't know how to prepare for tests.	-	-	-	-	27	11	33	14	-	-
21. My courses are too far removed from everyday life.	-	-	-	-	-	-	59	10	-	-
22. My teachers don't understand me.	-	-	-	-	-	-	41	11	-	-
23. I am too restless to stay in school	-	-	-	-	-	-	30	16.5	-	-
24. I wish I could quit school now.	-	-	-	-	-	-	30	16.5	-	-

TABLE LIX

ITEMS MARKED BY TWENTY FIVE PER CENT OR MORE OF THE GROUPS: AFTER HIGH SCHOOL

QUESTION	GRADS. %	Rank	GRADE 12 %	Rank	GRADE 11 %	Rank	GRADE 10 %	Rank	CONTIN. %	Rank
1. What jobs are open to high school graduates?	73	1	88	2	38	8	-	-	50	7.5
2. How do I go about finding a job?	71	2	88	2	62	2	-	-	43	9.5
3. For what work am I best suited?	64	3	-	-	42	7	44	4	79	1.5
4. Where can I go for help in finding a job?	58	4.5	88	2	35	9.5	-	-	50	7.5
5. What shall I do after high school?	58	4.5	-	-	-	-	-	-	-	-
6. What are my real interests?	53	6	29	13	-	-	-	-	-	-
7. What career shall I pursue?	42	7	-	-	-	-	-	-	71	4
8. How much ability do I actually have?	40	8.5	47	6.5	35	9.5	37	6	71	4
9. What are some careers for girls?	40	8.5	-	-	31	11	-	-	-	-
10. For what kind of job should I apply?	38	10	35	10	-	-	30	7	-	-
11. Do I have the ability to do college work?	29	11	41	8	-	-	-	-	64	6
12. I would like to have more vocational courses.	-	-	76	4	-	-	44	4	43	9.5
13. What are the opportunities in different fields?	-	-	65	5	-	-	-	-	71	4
14. What courses will be more valuable to me later on?	-	-	47	6.5	-	-	-	-	-	-
15. I want to learn a trade.	-	-	35	10	50	4.5	56	2	-	-
16. I would like to know more definitely how I am doing in my school work.	-	-	35	10	-	-	26	8	79	1.5
17. I wish I could write good letters of application.	-	-	29	13	54	3	63	1	-	-
18. How can I prepare for a job interview?	-	-	29	13	46	6	44	4	-	-
19. How should I act during an interview?	-	-	-	-	73	1	-	-	-	-
20. I have no work experience.	-	-	-	-	50	4.5	-	-	-	-

TABLE LX

ITEMS MARKED BY TWENTY FIVE PER CENT OR MORE OF THE GROUPS: ABOUT MYSELF

1. I worry about little things.	40	1	29	7.5	38	10.5	-	-	36	12.5
2. I often do things I later regret.	38	3.5	29	7.5	69	2.5	37	10	43	8
3. I would like to discuss my personal problems with someone.	38	3.5	29	7.5	62	4.5	59	7	-	-

TABLE LX (contin.-----)

QUESTION	GRADS. %	Rank	GRADE 12 %	Rank	GRADE 11 %	Rank	GRADE 10 %	Rank	CONTIN. %	Rank
4. I'm afraid of making mistakes.	38	3.5	29	7.5	-	-	33	12	-	-
5. I worry about tests.	38	3.5	47	4	69	2.5	78	1	57	5
6. I have trouble keeping my temper.	36	6.5	-	-	38	10.5	-	-	-	-
7. I must learn to "keep my head" when things go wrong.	36	6.5	-	-	-	-	-	-	64	3.5
8. I'm afraid to speak up in class.	29	8	-	-	54	6.5	74	2.5	43	8
9. I'm nervous.	27	9.5	-	-	-	-	41	8	36	12.5
10. I feel that I'm not as smart as other people.	27	9.5	65	1	88	1	74	2.5	79	1
11. I'm trying to get rid of an undesirable habit.	-	-	59	2	-	-	-	-	-	-
12. My feelings are easily hurt.	-	-	53	3	46	8.5	37	10	36	12.5
13. I'm easily excited.	-	-	29	7.5	46	8.5	37	10	-	-
14. I feel that I'm not wanted.	-	-	29	7.5	-	-	-	-	-	-
15. I'm unsure of myself.	-	-	-	-	62	4.5	63	6	64	3.5
16. I feel guilty about things I have done.	-	-	-	-	54	6.5	-	-	71	2
17. I don't see much future for myself.	-	-	-	-	-	-	67	4.5	-	-
18. I wonder if I am normal in the way my mind works.	-	-	-	-	-	-	67	4.5	-	-
19. I can't help daydreaming.	-	-	-	-	-	-	30	14	29	16
20. I need to learn not to let people push me around.	-	-	-	-	-	-	30	14	-	-
21. I must always be "on the go".	-	-	-	-	-	-	30	14	36	12.5
22. I'm afraid of failure or humiliation.	-	-	-	-	-	-	-	-	50	6
23. I lack the drive others have.	-	-	-	-	-	-	-	-	43	8
24. I'm always thinking up alibis.	-	-	-	-	-	-	-	-	36	12.5
25. I bite my nails.	-	-	-	-	-	-	-	-	36	12.5

TABLE LXI

ITEMS MARKED BY TWENTY FIVE PER CENT OR MORE OF THE GROUPS: GETTING ALONG WITH OTHERS

1. I want to make new friends.	47	1	71	1	77	2	74	3	-	-
2. I get stage fright when I speak before a group.	44	2	65	2.5	81	1	81	1.5	29	9
3. There aren't enough places for wholesome recreation where I live.	40	3	35	6	62	4	-	-	36	6.5
4. I want people to like me better.	38	4	65	2.5	69	3	81	1.5	-	-
5. I need to learn to be a good listener.	33	5.5	-	-	58	5	-	-	-	-

TABLE LXI (contin.-----)

QUESTION	GRADS. %	Rank	GRADE 12 %	Rank	GRADE 11 %	Rank	GRADE 10 %	Rank	CONTIN. %	Rank
6. I need to develop self-confidence.	33	5.5	-	-	54	6	63	4	64	2
7. I want to feel important to society or my own group.	31	7	53	4	50	7	30	7.5	50	3.5
8. I need to learn how to plan a party.	-	-	47	5	-	-	-	-	-	-
9. I need to learn to be more tolerant of other people's opinions.	-	-	29	7.5	35	10	-	-	-	-
10. I wish I knew how to drop a person I no longer want for a friend.	-	-	29	7.5	-	-	-	-	-	-
11. I wish I had things to talk about in a group.	-	-	-	-	46	8	-	-	-	-
12. I don't know how much of my inner feelings to reveal to my friends.	-	-	-	-	42	9	30	7.5	-	-
13. I wish I were more popular.	-	-	-	-	31	11	37	6	36	6.5
14. I'm often left out of things other kids do.	-	-	-	-	-	-	52	5	-	-
15. I can't find a part-time job to earn spending money.	-	-	-	-	-	-	26	9.5	-	-
16. I wish I knew how to use cosmetics properly.	-	-	-	-	-	-	26	9.5	-	-
17. I need money for social affairs.	-	-	-	-	-	-	-	-	79	1
18. I don't know how to introduce people properly.	-	-	-	-	-	-	-	-	50	3.5
19. I wish I could carry on a pleasant conversation.	-	-	-	-	-	-	-	-	36	6.5
20. I'd like to know how to become a leader in my group.	-	-	-	-	-	-	-	-	36	6.5

TABLE LXII

ITEMS MARKED BY TWENTY-FIVE PER CENT OR MORE OF THE GROUPS: MY HOME AND FAMILY

1. I want to be accepted as a responsible person by my parents.	49	1	47	1	58	1.5	52	3	36	2.5
2. I wish I had my own room.	31	2	-	-	42	3.5	-	-	-	-
3. There is constant bickering and quarreling in my home.	29	3.5	29	4	-	-	-	-	-	-
4. My parents are too strict about going out at night.	29	3.5	-	-	-	-	-	-	-	-
5. I feel that I'm a burden on my parents.	27	5	-	-	-	-	-	-	-	-
6. I can't discuss personal things with my parents.	24	6.5	35	2.5	31	7.5	41	6	-	-

TABLE LXII (contin.-----)

QUESTION	GRADS. %	Rank	GRADE 12 %	Rank	GRADE 11 %	Rank	GRADE 10 %	Rank	CONTIN. %	Rank
7. My family is always worried about money.	24	6.5	-	-	35	6	52	3	-	-
8. My parents interfere with the spending of the money I earn.	-	-	35	2.5	-	-	-	-	-	-
9. I want to get married soon.	-	-	-	-	58	1.5	-	-	-	-
10. I have no quiet place at home where I can study.	-	-	-	-	38	5	-	-	-	-
11. My parents hate to admit that I'm sometimes right.	-	-	-	-	31	7.5	-	-	-	-
12. I am seldom consulted in family decisions.	-	-	-	-	42	3.5	52	3	-	-
13. My father is a tyrant.	-	-	-	-	27	9	-	-	-	-
14. My parents avoid discussing sex with me.	-	-	-	-	-	-	59	1	-	-
15. I wish I could get my parents to treat me like a grownup.	-	-	-	-	-	-	48	5	-	-
16. My parents are too strict about dating.	-	-	-	-	-	-	33	7	-	-
17. I'm afraid to tell my parents when I've done something wrong.	-	-	-	-	-	-	20	8	57	1
18. I'm criticized for dating a person of whom others do not approve.	-	-	-	-	-	-	-	-	36	2.5
19. I wish I could gain the confidence of my parents.	-	-	-	-	-	-	-	-	29	4

TABLE LXIII

ITEMS MARKED BY TWENTY-FIVE PER CENT OR MORE OF THE GROUPS: BOY MEETS GIRL

1. What things cause trouble in marriage?	49	1	-	-	35	8	44	5	29	7.5
2. How can I prepare myself for marriage and family life?	44	2	41	1	50	2	-	-	-	-
3. I don't know how to break up with a person I have been dating without causing hard feelings.	33	3	-	-	-	-	-	-	29	7.5
4. I'm bothered by dirty stories or vulgar talk.	31	4	-	-	-	-	-	-	-	-
5. I want to know about venereal disease.	29	6	-	-	52	1	52	3	57	1
6. How long should people know each other before getting married?	20	6	-	-	38	5.5	-	-	-	-
7. How far should high school students go in love relations?	29	6	-	-	-	-	-	-	-	-

TABLE LXIII (contin.-----)

QUESTION	GRADS. %	Rank	GRADE 12 %	Rank	GRADE 11 %	Rank	GRADE 10 %	Rank	CONTIN. %	Rank
8. I need an acceptable vocabulary to discuss sex.	-	-	29	2	35	8	56	2	-	-
9. What things should one consider in selecting a mate?	-	-	-	-	46	3.5	-	-	29	7.5
10. I need more correct information about sex.	-	-	-	-	46	3.5	67	1	50	2
11. I think about sex a good deal of the time.	-	-	-	-	38	5.5	-	-	-	-
12. Is drinking harmful?	-	-	-	-	35	8	44	5	29	7.5
13. I wonder if I am normal in my sexual development.	-	-	-	-	-	-	44	5	-	-
14. I'm embarrassed in any discussion of sex.	-	-	-	-	-	-	33	7	-	-
15. I have conflicting information about sexual matters.	-	-	-	-	-	-	26	8	-	-
16. I'm bashful about asking girls for dates.	-	-	-	-	-	-	-	-	36	3.5
17. How do I refuse a date politely?	-	-	-	-	-	-	-	-	36	3.5
18. I don't know how to keep (boys) (girls) interested in me.	-	-	-	-	-	-	-	-	29	7.5
19. Is it all right to accept "blind dates"?	-	-	-	-	-	-	-	-	29	7.5

TABLE LXIV

ITEMS MARKED BY TWENTY-FIVE PER CENT OR MORE OF THE GROUPS: HEALTH

1. I want to gain or lose weight.	47	1	47	2	54	1.5	41	2	36	7
2. I want to get rid of pimples.	40	2	35	6	-	-	-	-	50	2.5
3. I want to learn how to select foods that will do me the most good.	38	3	71	1	54	1.5	37	3.5	57	1
4. I want to improve my posture and body build.	27	4	-	-	-	-	33	5.5	43	5
5. I worry about my health.	-	-	41	3.5	31	5	37	3.5	29	8
6. I get tired easily.	-	-	41	3.5	-	-	-	-	50	2.5
7. I don't get enough sleep	-	-	35	6	-	-	-	-	-	-
8. I'm concerned about improving my figure.	-	-	35	6	27	6.5	-	-	-	-
9. I have frequent headaches.	-	-	29	8	27	6.5	-	-	-	-
10. Is smoking harmful?	-	-	-	-	38	3	-	-	-	-
11. My teeth need attention.	-	-	-	-	35	4	59	1	29	8
12. I have no "pep".	-	-	-	-	-	-	33	5.5	-	-
13. I wonder if I am normal in my energy and endurance.	-	-	-	-	-	-	-	-	43	5
14. I smoke too much.	-	-	-	-	-	-	-	-	43	5

Continuing Group

1. I have difficulty expressing myself in words.
2. I feel that I'm not as smart as other people.
3. For what work am I best suited?
4. I would like to know more definitely how I am doing in my school work.
5. I need money for social affairs.

Examination of the items named above helps to emphasize the concern of the graduate and the grade 12 group with problems associated with occupational preparation, and further, that the grade 10 and grade 11 groups were less concerned with the problems of occupational preparation than they were with the kinds of items associated more immediately with work in school.

THE CONTINUING GROUP

Throughout this phase of the report dealing with the prospective sample, there has been reference to the continuing group. This group was composed of 14 boys and girls who did not graduate, but who have not withdrawn. Because this group appears to be different from the other sub-groups of the sample with reference to their persistence in staying in school, they were selected for special consideration. This was done with the thought that some characteristic unique to this group might be discovered which could be related to their continuance in school.

Marks in subjects for the continuing group were significantly lower than for the graduate group, but were slightly higher than the average marks for the other groups. The mean marks obtained for the continuing group pupils in total subjects were very similar to the mean marks obtained for the grade 11 withdrawal group. Thus they appeared to be an in-between group between the graduating group and the early withdrawal groups, but more nearly resembling the withdrawal groups.

Comparison of the continuing group mean IQ with the mean IQ of the corresponding sibling group showed a difference of just over 20 IQ points. This was the largest of the differences obtained between the study group mean IQ's and the corresponding sibling mean IQ's, and the sibling group corresponding to the continuing group was the sibling group with the highest mean IQ.

In studying the Progression in Grade of the continuing group, it was found that only two pupils had failed and both of these failures had occurred at the third grade level. This is the lowest incidence of failure found for any of the sample study groups.

In regard to the Highest Grade Completed by Parents, the parents of the pupils in the continuing group had about the same mean highest grade completed as the parents of the pupils in the graduating group, except that the mothers of the pupils in the continuing group had achieved a higher level of formal education than any of the other groups of mothers. The parental occupations for the continuing group showed approximately the same pattern as that for graduates and withdrawals--most were in the unskilled and service classifications.

Another factor that may be of importance is the low mobility rate of the pupils in the continuing group. Their average number of elementary schools attended was the lowest of all of the sub-groups, including graduates, in both samples. This may be indicative of greater residential stability on the part of the pupils in the continuing group, and may be the prime factor in their persistence in continuing in school.

With reference to the other areas studied, the mean IQ for the continuing group at 71 was not substantially different from the group mean IQ's found for the other sample groups. For Teachers Ratings on Personal Characteristics the continuing group was marked high in "Appearance" and low in

"Initiative". This corresponds to the ratings for the graduate group and, with respect to "Initiative", for all of the other groups. However, the continuing group had an average rating in "Attitude Toward School Regulations" and it was at this point that they differ from the graduate group, which had an above average rating on this trait. Also, the continuing group pupils did not show above average ratings in the 7th and 8th grade as did the graduate group, but were similar to the withdrawal groups. There was a noticeable drop in rating on combined personal characteristics beginning at the 9th grade as was the case for the withdrawal groups, but there was at least partial recovery in the 11th grade when the ratings were average. This is the only point at which the pattern of ratings differs from the early withdrawal groups. Data concerning special education experience in the elementary schools shows that the continuing group had the highest percentage in special education, and that the mean number of years spent in special was similar to the values obtained for the groups 11 and 12. On the SRA Youth Inventory the number of items marked by 25 per cent or more of the group was approximately the same as the number recorded for groups 10 and 11. The mean number of marks per pupil was greater than the graduate group, but less than the grade 12 group. The type of items most often marked by 25 per cent or more of the continuing group were a mixture of items in that they involved items about school, occupations, questions about their own ability, and money for social affairs.

The continuing group also had no recorded appearances in Juvenile Court, but because of the low incidence of Juvenile Court appearance by the other sub-groups of the sample, and the small number of pupils in the continuing group, this is probably not especially meaningful.

In summary, it appears that with respect to efficiency in school operation the continuing group was not as efficient as the graduate group, but was enough more efficient than the withdrawal groups to stay in school. The sibling group corresponding to the continuing group showed the highest mean IQ, and the highest grade completed by parents showed the mothers of the pupils in the continuing group to have the highest mean grade completed of any portion of the sample parents. It may be that the relative effectiveness of the pupils in the continuing group in achieving average ratings on personal characteristics during the 11th grade represents a rejuvenation sufficiently strong to carry them through the 12th grade. Greater residential stability, as reflected by mean number of elementary schools attended, may be a key factor in their persistence in staying in school.

SUMMARY AND DISCUSSION

Although this school system has for many years made special provisions for educable mentally retarded pupils in the elementary school, special provisions in the secondary school have not been well developed or generally available. This study was proposed as an exploration of the school history of a sample of educable mentally retarded adolescents with a view toward identifying factors related to continuance in school, and providing information upon which to base recommendations as to how the secondary school program may be modified to meet better the needs of such pupils. An additional interest was to study the effect of a change in the Missouri Compulsory Attendance Law, as reflected by the age of withdrawal of pupils in a second sample drawn from current enrollees at the time this study was started.

This study was in two parts, and involved two samples of pupils. One sample was made up of those pupils in the 8th or 9th grade in the fall of 1952, and who scored with an IQ of 80 or below on an individual intelligence test. These pupils would have had the opportunity to graduate or complete their school experience. This group of pupils is referred to in this study as the retrospective sample. The other sample was composed of pupils with measured IQ's of 80 or below who were in the 10th grade at the time this study was started. This group of pupils is referred to in this report as the prospective sample. The retrospective sample included 354 pupils and the prospective sample included 158 pupils. For purposes of organization and comparison, each sample was divided into sub-groups according to the year of withdrawal or graduation from school. Data were then gathered for both samples and comparisons made of the sub-groups within each sample, and, also, of the corresponding sub-groups in both samples. On this basis the prospective sample may be viewed as a validating group for the retrospective sample. Data were obtained from three general sources: (1) school records, (2) interviews, and (3) the records of community agencies. The areas explored may be grouped under general headings as follows: Incidence of Graduates and Withdrawals, Factors Involving Personal Characteristics, Factors in the School Setting, Factors in Community Operation, Factors Involving Parents, Factors Involving Siblings, Factors Involving Personal Problems, and Employment After Leaving School. Information was accumulated under each heading, and comparisons were made among the sub-groups of the sample and between the corresponding sub-groups of both samples.

INCIDENCE OF GRADUATION AND WITHDRAWAL

One of the major objectives of this study was to discover the incidence of graduation and withdrawal among educable mentally retarded pupils in the secondary school. The answer obtained here was that a large majority of the pupils in the two samples left school early, but that some pupils stayed on to graduation. The recognition of failure in the high school setting apparently came early, since approximately 58 per cent of the withdrawals in the retrospective sample had withdrawn before reaching the 10th grade. No comparable figures are available for the prospective sample, but the number of pupils remaining in the retrospective sample at the 10th grade exceeded the number of pupils in the prospective sample by only 26, indicating that had the prospective sample been identified at an earlier grade level it probably would have been comparable to the retrospective sample in terms of number of pupils, and would likely have exhibited the same pattern of early withdrawal. It is clear that the educational mortality rate of these pupils was quite high.

EFFECT OF CHANGE IN COMPULSORY ATTENDANCE LAW

Inquiry into the effect of the change in the state compulsory attendance law showed no appreciable change in chronological age at withdrawal for the pupils in the prospective sample.

FACTORS RELATED TO SCHOOL CONTINUANCE

Certain principal factors that appear to be markedly related to continuance in school emerged from the mass of accumulated data. Other factors were demonstrated to have a low positive relationship which was probably significantly different from zero, but which would not serve as adequate predictive criteria. Still other factors were found to have little or no relationship to continuance in school. Factors with marked relationship and those with low positive relationship were combined, and are reported in Table LXV along with the factors bearing little or no relation to continuance in school.

The factor of marks in subjects appeared to be the most powerful in differentiating between early withdrawals and graduates. Marks recorded for the pupils in the graduate groups were consistently and significantly higher than the marks recorded for the pupils in the early withdrawal groups. This

TABLE LXV

FACTORS RELATED TO CONTINUANCE IN SCHOOL

Factors Related to Continuance in School	Factors With Little or No Relation to Continuance in School
Marks in subjects	Measured Intelligence
Sex of pupil	Special education experience in elementary school
Number of personal problems reported	Sibling IQ
Ratings on personal traits	Parent occupation
Pupil mobility	Parent membership in organizations
Sibling education	Number of special interests of pupils
Parent education	
Low incidence of Juvenile Court Records	
Incidence of health problems	
Participation in extra-curricular activities	

was true for both total grade point average and marks in academic subjects. The greater success of girls was evident, and this may be related to the likelihood that the girls were better groomed and less rebellious toward school regulations, resulting in higher marks and more apparent success in school. Perhaps the girls were more tolerant to school frustrations, and felt less compulsion to escape the school setting.

Among the other factors related to continuance in school, ratings on personal traits appears to be one of the more powerful. On the basis of these ratings, it appears that if a child comes to school with a good attitude toward the kinds of behavior expected of him, if he tries to do the work, and if he is neat and well groomed, then his chances for success in the school are enhanced. The number of personal problems reported on the SRA Youth Inventory is another factor that seems to exert power in differentiating graduates and early withdrawals. The graduates expressed less concern about their own ability and about improving their relations with others than did the early withdrawal groups. The factor of pupil mobility may be another important element in fostering continuance in school. This factor may also be related to parental occupation and education, and may reflect the general stability of the home environment.

From the point of view of predicting high school graduation, it appears that the pupil who may not be greatly different from the other pupils with respect to measured potential, but whose attitude toward school work and school regulations is good, who receives average marks in at least some subjects, who has not been highly mobile, who has not been involved with Juvenile Court, and who participates (even minimally) in extra-curricular activities, is a likely candidate for graduation. On the other hand, a pupil who may not be much different from the other pupils with respect to measured potential, but whose attitude toward the school is not good, who has been unsuccessful in achieving average marks in at least some of his subjects, who has moved from school to school, who has been involved with the Juvenile Court, whose parents and siblings have not been very successful in achieving formal education, who does not participate in extra-curricular activities, and is a boy, is most likely to be an early withdrawal.

The remarkable similarity of the retrospective and prospective sample pupils has been noted previously, and is demonstrated in the information, representing most of the areas studied, reported in Table LXVI. When two separate samples, drawn with a time interval of approximately three years, correspond as closely as these samples it argues well for their representativeness.

SIGNIFICANCE FOR ORGANIZATION AND CURRICULUM

The high incidence of withdrawal during the early years of the high school indicate clearly that whatever program may be provided for pupils of this kind needs to be available to them early in their high school experi-

TABLE LXVI

COMPARISON OF RETROSPECTIVE AND PROSPECTIVE SAMPLES ON CERTAIN VARIABLES

Prospective Sample	Variable	Retrospective Sample
31.94*	Per cent Graduated	32.07*
68.06*	Per cent Withdrew	67.93*
71.28	Mean IQ, Total Sample	72.20
18.67	CA at Graduation	19.10
2.54	Mean Marks, All Subjects, Total Sample	2.61
2.86	Mean Marks, All Subjects, Graduates	2.95
2.31	Mean Marks in Acad. Subjects, Total Sample	2.31
2.64	Mean Marks in Acad. Subjects, Graduates	2.64
Music, PE, Art, Pract. Art	Subjects with Highest Marks	Music, PE, Art Pract. Arts
Academics(re p.23)	Subjects with Lowest Marks	Academics
Appearance	Personal Traits Rated Above Average	Appearance, Attitude Toward School Regulations
Initiative, Partic. in Group Activity	Personal Traits Rated Below Average	Initiative
3.66	Mean Rating on Combined Traits, Graduates	3.68
2.37	Mean Years in Spec. Educ., Total	2.40
2.08	Mean Years in Spec. Educ., Graduates	2.00
7.90	Parent Highest Grade Completed, Total	8.20
16.30	Mean Diff. Between Sample Mean & Sib. Mean IQ	15.30

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* Adjusted base. The prospective sample was adjusted for the continuing group, and the retrospective sample was adjusted to a grade 10 base. Actual graduate per cents for prospective sample was 29%, and for retrospective sample was 17%. Other comparisons not on adjusted base unless marked by asterisk.

ence. It would be most desirable if such a program were available immediately upon entering the high school years.

Most pupils, at the time of withdrawal, were receiving failing marks in academic subjects, and many of them were failing in all subjects. This indicates the need for decreased emphasis on academic subjects, as presently offered, for these pupils. Although a popular reason given for withdrawal is to "go to work", the fact that most were failing in school work was probably an important factor in arriving at the decision that that particular time was a good time to withdraw from school. In view of the expressed desire of many of these pupils to learn a trade, and their relative success in Practical Arts, it would seem reasonable that a program for them should carry a provision for pre-occupational training. Such a program should incorporate a regular sequence in modified Practical Arts, coupled with a work-experience program embodying principles of on-the-job training. The remainder of their program should be developed around a core of instruction in the subjects described in this report as academics, but with content and techniques modified to the level at which they can profit most from the instruction. The core should include also some experience with the Fine Arts, since this was another area in which they found relative success, and a provision for instruction in Health and Physical Education.

It is recognized that in order to accomplish such a program it would be necessary that the school experience lead to something other than the usual diploma, and thus provide relief from attempting to fill graduation requirements.

SIGNIFICANCE FOR COUNSELING

The expressed concern of many of these pupils about their own ability leads to the recognition of the need for an intensified and continuing program of counseling based upon competent individual assessment. Counseling interviews should be available to these pupils as a time when they could discuss their personal problems, and find interested concern about their work in school. This would also provide the opportunity to discuss their strengths and weaknesses and arrive at a realistic appreciation of their potentialities. Such a counseling program would probably require additional staff with the interest and training necessary to provide competent service for these pupils.

Since many of the concerns expressed by these pupils centered around problems associated with job procurement, either the counseling program or the training program should certainly provide for instruction and discussion concerning occupational and job-related information.

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In review, it might be desirable to consider one of the factors, reported here as associated with school continuance, as predisposing conditions favorable either to continuing in school or to early withdrawal. Such predisposing conditions are listed below.

Conditions favorable to continuance in school

1. Continuing successful (non-failing) performance in at least some subjects.
2. Participation in some school-connected activity.
3. Active interest and participation in extra-school activities and organizations.
4. Parents who have enjoyed some success in formal education.
5. No record in Juvenile Court.
6. Stability in school attendance, in the sense that the pupil has not moved from school to school and, thus, has had the opportunity to develop firm associations.
7. Sibling success with formal education.
8. Good attitude toward school regulations and pleasing appearance.
9. Girls tend to be more persistent in continuance in school.

Conditions favorable to early withdrawal

1. Cumulative academic failure
    - low marks in subjects
    - low ratings on personal characteristics
    - multiple retentions in grade
2. Non-participation in school-connected activities.
3. Few extra-school organized interests or activities of a wholesome nature.
4. Record in Juvenile Court.
5. Low parental achievement in formal education.
6. High mobility rate - pupil has attended many different schools, with little opportunity to establish firm associations in any one place.
7. Unsuccessful experience by siblings with formal education.

Such predisposing conditions as described above may be present in any combination, and may be exerting influence upon the pupil in varying degrees.

Under such conditions, almost any situation that induces further pupil frustration, or interrupts the continuity of attendance, may serve as a precipitating element to produce early withdrawal. School personnel should be alert to identify individual pupils for whom predisposing conditions favorable to early withdrawal are present, and should be sensitive to, or perhaps even anticipate, situations that might act as precipitating elements.

Vigorous, persistent, and perceptive action in dealing with precipitating elements, coupled with efforts to alter unfavorable predisposing conditions through guidance and curricular and organizational modification, constitutes the heart of the school action program directed toward reducing the incidence of early school withdrawal.

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2. Peatman, John Gray, DESCRIPTIVE AND SAMPLING STATISTICS, Harper and Bros., New York, 1947 p. 373. Where,

$$T = \frac{S\% - h\%}{100\sqrt{\frac{pq}{N_s}}}$$

3. ____, p. 95. Where

$$C = \frac{S-N}{S}$$

This was the formula applied wherever reference is made to contingency coefficient in this report.

4. Where

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sum X_1^2 + \sum X_2^2 - \left[\frac{(\sum X_1)^2}{N_1} + \frac{(\sum X_2)^2}{N_2}\right]}{N_1 + N_2 - 2}\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$$

5. Federal Security Agency, DICTIONARY OF OCCUPATIONAL TITLES: OCCUPATIONAL CLASSIFICATION AND INDUSTRY INDEX, Vol. II, Second Edition, United States Government Printing Office, Washington: 1949

6. Remmers, H.H., and Benjamin Shimberg, SRA YOUTH INVENTORY, Science Research Associates, Chicago, Illinois, 1949, Form A